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ABSTRACT

This document is a review of literature on adult learning, assembled in a computer-printout format. It brings together brief statements made by authors on the various major aspects of individual and social (associational) learning, as well as information on planning and evaluation. The document also contains a glossary of adult education terms and a bibliography. Although the document is presented in the conventional form of a monograph, the soft-wear support system allows the data base to be continually updated by additions and deletions. The document covers the major learning theories, the teacher/facilitator's role, as well as the process of facilitation, and reflections on the management of thinking and feeling. (KC)

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NOTES & QUOTES
ON ADULT LEARNING

prepared by John R A Dobson
Department of Adult Education
SAINT FRANCIS XAVIER UNIVERSITY

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ACKNOWLEDGEMENTS

Over the years, in my work with adults, I developed various practises which aided my facilitation of their, and my own, learning. Probably my "hit and miss" approach parallels many, if not most, adult educators. As I began seeking ways to refine my techniques in a literature search, I encountered that most, if not all, my ideas were already documented by recognized authorities in the field.

I also found that many other of the vassilations which I had experienced deciding which techniques to use were embodied in differing theoretical positions. My own frustrations with not being sure what to do in a particular situation were the same points where leading authorities seemed to state categorical, but opposing, positions.

To a large degree the conflict which I experienced focused on the question of my intervention in the learning process. To what extent, if at all, should I, as an adult educator, intervene in a person's learning experience. I do not suggest an answer in this study, but I do share my findings.

I wish to credit the contribution made by certain colleagues to this work. Dorothy Landers began a glossary of terms which provided a most useful beginning; Mike Burns wrote a neat statement on the writing of objectives; Pat Shreenan challenged the "sacred cows" of objectives and facilitation in her search of the literature; Susan Joiner contributed to the concept of social learning; Vangie Kelpie to the theory of learning; Mary Ellen Driscoll to evaluation; Bob Freeman to self- directed learning.

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PREFACE

Adult Education has its roots in several traditions: skill training for the workplace, human development for life, and both the acceptance and rejection of schooling.

Fortunately, society has resisted the pressure of formal school educators to expand their jurisdiction to include this area of learning, because it had afforded to a wider spectrum of people the opportunity to practice the skills of both teaching and learning without the bureaucratic control of licensing the teaching and certifying the learning.

This has permitted virtually anyone who had "something" to teach to offer it to virtually anyone who wanted to learn that particular "something". Men and women from every walk of life have entered what has become known as a "learning society".

Adult educators, for the most, have emerged from the practical, real world, and their writings reflect this pragmatism: what works is what is! They take positions which might appear contradictory in the literature however, in their unique manner of applying them to a learning situation, they seem to work. The operative word is "unique".

Adult educators who read this review are cautioned to consider the various principles and techniques as being one part of the "magic" that transforms an ordinary human being's learning experience. The science doesn't seem to work without an art form which each must find for self.

Adult educators, through theirknowledge of interpersonal communications & group dynamics have at their disposal a very powerful mechanism within which to achieve learning. Indeed communications is the centerpiece to any learning enterprise, for without it learning cannot take place.

The non-formal environment for adult education is important to an understanding of the various principles of learning that have been introduced by theoreticians and practitioners alike. Similarly, consideration of the place of the individual in society is fundamental to an understanding of how learning happens.

While terms like trainer, instructor, animator, coordinator, teacher and facilitator have often been used synonymously, adult educators tend to try and differentiate between the authorative figure recalled from the formal school setting of their past and the helping figure of the non-formal environment.

The planning of non-formal learning experiences draws heavily on the principles of communication, learning and facilitation as well as traditional curriculum theory and learning by objectives. The strategies conceived to evoke learning walk the fine line between manipulating the learner and providing an ambience conducive to learning. The model for learning described at the end of the planning section seeks to integrate the principles of communication, learning, facilitation, planning and evaluation. This model has been the basis of numerous successful programs, and some that were utter failures! The model will assist the competent adult educator in working with willing learners; it is of marginal utility when either or both of these variables are absent.

The making of judgements as to human learning has become, in recent times, the major component of planning. Indeed, the assessing of learning needs, the appraising of learning including its continuous feedback as program plans unfold, and an ultimate evaluation have caused adult educators to reconsider the relationship between the facilitator and learner and the importance of self and other direction.

As with any other inquiry into the nature of phenomena a vocabulary has emerged. This glossary is tentative and the reader is encouraged to make even more precise, the vocabulary of adult education.

The literature listed at the end includes the works of the few major and numerous other authors whose thinking and experience has helped create the field of adult non-formal education.

While theorists will argue about what learning is or is not it becomes readily apparent that the fundamental elements that interact in the moment of learning are an attitude change which triggers a reordering of the logical frame of thinking which in turn results in some original [for the learner] behavioral manifestation; thus the affective, cognitive & psychomotor domains are reintegrated in some appropriate way enabling the person to continue developing.

1. ADULT LEARNING

1.1 INTRODUCTION

In an educational context there has emerged a considerable literature on the importance of adults' learning lifelong. The following quotes are just a sampler of writers' views as to the importance of learning throughout life.

> "In time it [lifelong learning] will become such an integral part of human existence that all mankind will be learning systematically all the time" (Verner, 1966).

> "The education of adults has constituted an integral part of all cultures at all times in history" (Verner, 1976).

> "The adults' learning projects will continue to be a significant & an integral part of his total life" (Tough, 1971).

> "In the learning society, formal education would spread throughout one's lifetime" (Hesbourg, 1974).

> "The definition of recurrent education ... accepts the principle of lifelong learning" (OECD report, 1977).

> "Adult education presumes that the creative spart may be kept alive throughout life" (Lindeman, 1975).

> "This new venture called adult education -- not because it is confined to adults but because adulthood, maturity, defines its limits. The concept is inclusive" (Lindeman, 1975).

> "... adult education, as the final stage in the education of the citizen of a free society, ...should continue throughout the active life of the individual" (Peers, 1972).

> "In short, my conception of adult education is ...a technique to learning for adults which makes education coterminous with life & hence elevates living itself to the level of adventurous experiment" (Knowles, 1976).

1.2 INDIVIDUAL &/OR SOCIETY

What is the human learning unit ? Is it the individual ? Is it the social unit ? Theoretical models of learning seem to begin from one or the other premise; either the individual is integral & can atomistically be the creator of learning, or that the individual is only a part of a social structure that is integral & creates the learning. In the literature there are many variations & combinations which attempt to answer these questions. Interesting to observe is the way that North Americans & Germanic Europeans cluster in the category of atomists, while Latin Europeans, Latin Americans & Asiatics cluster under the category of holists.

Another question that is important to explore is the role of voluntarily associated persons in a learning enterprise.

The notes & quotes of this introductory section examine these questions from a philosophical [socio/ politico/ psychological] point of view because these issues transcend learning & are found at the root of all human thought, attitude & behavior.

1.2.1 METHODOLOGICAL INDIVIDUALISM
(Boonin in Pennock,1969)

If the only things which are real are the individuals who compose society, then the only kinds of explanations of behavior in society which would be complete would be explanations in terms of the actions of these individuals. One implication drawn sometimes is that sociological explanations in terms of sociological laws are incomplete and in principle reducible to psychological laws and explanations. This position was clearly formulated in A SYSTEM OF LOGIC:

> men ... in a state of society are still men; their actions and passions are obedient to the laws of individual human nature. Men are not when brought together, converted into another kind of substance, with different properties: as hydrogen and oxygen are different from water ... human beings in society have no properties but those which are derived from, and may be resolved into, the laws of the nature of individual man. (Mills)

The position of methodological individualism has not only been formulated by philosophers, but also adopted by noted social scientists. The principles of behavioristic psychology explains elementary social behavior:

> Yet we hold that we need no new propositions to describe and explain the social. With social behavior nothing unique emerges to be analysed only in its own terms. Rather, from the laws of individual behavior ... follow the laws of social behavior when complications of mutual reinforcement are taken into account. (Homans)

A number of distinguished cultural anthropologists have also adopted this viewpoint in their analysis of culture. To briefly quote from a few.

> "It is the individual who is responsible in the last analysis, for all additions to culture. Every new idea must originate with some person." (Linton)
>
> "Any culture element ... has radiated out, at last analysis, from a single person." (Sapir)
>
> "No civilization has in it any element which in the last analysis is not the contribution of an individual. Where else could any trait come from except from the behavior of a man or a woman or a child." (Benedict)

Each quotation reveals the acceptance of the principle of methodological individualism. Further acceptance of methodological individualism is based on ontological considerations. What else can be ultimately real besides individuals and their behavior? (Benedict)

The individualistic model can also become embedded in a philosophical system in such a way as to provide answers or at least an orientation toward answering some of the basic questions of social philosophy. One of the basic questions of social philosophy is "what ought the goals and functions of society to be". Since society is not something real with an independent existence and since it is merely a collection of individuals, it follows that the goals of society must be reducible to the goals of the individuals who compose it. Society has no goals because it is not a person and only persons have goals. Society is essentially a device to satisfy the needs and desires of the individuals who compose it. Society is conceived as essentially a means to the satisfaction of individuals who constitute the end.

Another basic question of social philosophy is "What are the grounds and limits of an individual's obligation within society". Since the atomist starts off with the reality of individuals, he must somehow justify the formation of societies and explain the nature and limits of the individual's obligation within society. The conceptual device which has usually been used is that of a contract.

Society arises out of an agreement. Because of the inconveniences of the state of nature, men enter into societies to obtain certain benefits of cooperative living. In doing so they agree to be bound by some authority on condition that the others also agree to be so bound.

It is important to see that for the purpose of social philosophy it is not necessary to interpret the social contract. (Boonin in Pennock,1969)

1.2.2 METHODOLOGICAL HOLISM

The conviction that society is some reality which is not reducible to the members of society reflects itself in the social sciences in terms of what has been called methodological holism. According to this doctrine, sociological and anthropological explanations are autonomous and nonreducible to psychological explanations. The doctrine has been formulated by various social scientists. Thus Emile Durkheim has argued:

> Individual minds, forming groups by mingling and fusing, give birth to a being, psychologically if you will, but constituting a psychic individuality of a new sort. It is then, in the nature of this collective individuality, not in that of the associated units, that we must seek the immediate and determining causes of the facts appearing therein. The group thinks, feels, and acts quite differently from the way in which its members would were they isolate. If, then, we begin with the individual, we shall be able to understand nothing of what takes place in the group. In a word, there is between psychology and sociology the same break in continuity as between biology and the physiochemical sciences. Consequently everytime that a social phenomenon is directly explained by a psychological phenomenon, we may be sure that the explanation is false.

The distinctive feature of methodological holism is the belief that out of the interaction of individuals in a society properties and characteristics emerge that cannot be found in the individual members who compose the society. The function of sociology, cultural anthropology, and other social sciences such as political science and economics is to discover laws and relationships among such emergent group properties.

Sometimes this belief is formulated in such a way as to imply that groups have a conscious and not merely an organizational existence independent of their members. Thus Durkheim has been interpreted as positing ontologically the existence of a group mind as some kind of collective individual. The tendency to speak as if there were such group minds arises from the need to attribute those properties to some subject. The subject of those group properties could be interpreted, however, as being the interacting individuals.

The tendency to speak of a collective as being an autonomous entity can also lead to the view that individuals are merely the vessels through which the group reality or VOLKSGEIST expresses itself. (Boonin in Pennock, 1969)

1.2.3 INDIVIDUALISM, HOLISM AND VOLUNTARY ASSOCIATIONS

How does this general analysis of the fundamental forms of social existence apply to the nature of voluntary associations? It is suggested that the interpretation of an association as free and voluntary varies with the model in terms of which that association is understood. Associated with the three models previously elaborated are three distinct conceptions of voluntary association.

Under the atomistic model a voluntary association is one in which the participating members freely consent to the establishment and continuation of their relationship. Free consent presupposes, among other things, that the members have certain basic capacities to deliberate and make decisions and that the decisions they make are uncoerced and made with knowledge of what they are doing. The decisions must also be made under circumstances in which alternatives exist. Needless to say, many problems of interpretation can arise as to whether or not a person has freely consented, as well as to what it is he has consented.

It is perhaps worth pointing out that even under this conception of a voluntary association it is possible for someone to become bound or obligated to do things which he does not want to. By freely choosing to join an association he is binding himself to obey certain commands or conform to certain rules which may conflict with his wishes. Unlike consenting to a particular act, consenting to join an association assumes accepting to such obligations. The limits of one's obligations within such a voluntary association constitutes one of the basic problems in the analysis of such associations.

The organic model gives rise to a radically different conception of freedom. As this model rejects the presupposition that individuals are autonomous and self-determing, it rejects the idea of freedom as based on choice and consent. Freedom is found in self-realization, not in self-determination. Man is essentially a social being who realizes himself by playing his role within society. He is free precisely when he is fulfilling this social role and function. the organicists frequently connect what man ought to do with what he wants to do. They argue that a person is free only when he does what he "really" wants to do. what he really wants to do is the same as what a "rational" being would recognize he ought to do and this is to fulfill his social role and function. Under this conception the idea of being "forced to be free" does not constitute a contradiction in terms.

The organic model gives rise to a conception of freedom. But does it develop a meaningful conception of a voluntary association? The social unit within which individuals realize their nature is generally treated as necessary and determined by forces beyond the individuals who compose it, e.g., VOLKSGEIST. Only if one can recognize freedom with necessity can we speak of the association as being voluntary. Under this model a voluntary association is perhaps one which genuinely gives expression to this collective reality and hence permits its members to fully realize and fulfill their natures.

The personal relations model gives rise to another conception of a voluntary association. It measures the voluntariness of an association not in terms of self-imposed rules, nor in terms of goals or ends which fulfill the nature of man, but rather in terms of the kind of feelings which engender and sustain its existence. Under this model a voluntary association is one based on "positive" feelings in which the members genuinely enjoy relating to each other and derive satisfaction and pleasure from their relationship. An involuntary association is one based on "negative" feelings and does not give rise to such satisfactions. Much of contemporary psychological theory and psychotherapy concerned with the theory and practice of "interpersonal relations" deals with voluntary associations in this sense. (Boonin in Pennock, 1969)

1.2.4 VOLUNTARY ASSOCIATION AS A RATIONAL IDEA

1. Associations are a means of rectifying, to a degree, the inequality(ies) found in society.

2. Associations seek to provide for the common good through providing for equality of opportunity in the pursuit of happiness; a richer notion than that of security of life in a social station. (Harris in Pennock, 1969)

Hurst's commentary on Harris suggests that we put a high value:

1. on enlarging the voluntary element in social relations (manifested in policies favoring in the dispersal of power),

2. on demanding reason in the use of power but reason valued as an aid in realizing man's humanity, and

3. on associated effort as the expression of the distinctive capacity for communication which allows men to increase the voluntary and humanely rational elements in their relations.

Those three points suggest two more: 4. technological development has pressed modern society into dependence on larger and larger aggregations of private power, and

5. the meeting of the needs of these larger collectivities has necessitated of private associations to come into working relationships with public authority. (Hurst in Pennock, 1969)

1.2.5 MAN AND SOCIETY: an examination of three models

1. The atomistic view is that society is merely a collection of individuals. In metaphysical terms an atomist is a nominalist, one who denies the reality of abstractions & who believes that society is such an abstraction. Individuals are real, with descrete and independent existence and with intrinsic properties and states of their own.

   The logical version of the atomist view is that for every statement in which some expression of "society" appears one can substitute without loss of meaning statements referring only to individuals, and their states & properties.

   The empirical version is that while the meaning of statements which use forms of the expression "society" cannot be reduced, the individuals who constitute society are the only things referred to by such statements.

   The logical version argues for an identity of meaning, the empirical for an identity of reference.

2. The organic-holistic view is that society is not a collection of individuals, but rather that individuals are mere parts of society. What is real is society as a whole and individuals are only real in relation to

this whole.

In logical terms the relation of man to society is not of members to a class, rather that of a part to a whole. The organic model is based upon society as a whole having instrinsic properties.

According to empirical interpretation, society is literally a living organism. A society becomes a process sui generis, self-determined, and autonomous. To be sure, culture could not exist without human beings. But it is not human beings who determine their culture by desire or design; it is culture that determines the behavior of peoples. (White in Mills 1965)

3. It is readily apparent that the empirical interpretation of the atomistic model is more plausible, but at the same time the logical interpretation of the organic model is more plausible. The disagreement between these two more plausible interpretations then turns on some metaphysical issues concerning the relation of concepts to reality. Whereas atomism is based on an empiricist epistemology which sees reality in terms of discrete entities, the organic model presupposes a rationalistic or idealistic epistomology and metaphysics which finds reality in forms and structures. For the organicist the universal is not an abstraction but a concrete reality.

4. An attempt to integrate the two models -- attempted first by Aristotle in POLITICS where the individual realizes himself within social units (family associations, community, etc.), then by Aquinas and even later by Rousseau -- is suggested in the "persons-in-relations theory" or model. According to this view society is a relational concept rather than a substantive one. Society is a relation among persons bound together by rules which govern their interaction and which give rise to their rights and obligations. Society is neither parts-to-whole nor members-to-class; it is a relation of subjects [persons]. A society is a community of subjects. While a community of subjects is a relational contract, the exact kind and quality of such relations is not completely determined by nature or human nature. There exists choices as to the kinds of laws governing human communities and to this extent the atomists' concepts of consent and self-interest are relevant and meaningful. The persons-in-relations theory accepts the fact that there can be different relations as well as different ways in which such relations arise. (Boonin in Pennock, 1969)

MULTILINEAR DEVELOPMENT

Stewart (1955) theorizes that the cultural development of people is necessarily multilinear and that communities evolve as a process of adaptation to their singular environment. The variance with other cultures is relative to its cultural ecology; that is, the particular conditions & needs of a community.

1.2.5 AN HISTORICAL PERSPECTIVE AS TO THE NATURE OF ORGANIZATIONS

Political philosophers from Plato and Aristotle forward attempted to describe the value of a different structure in the relationship amongst the individuals of a social system. the debate of thinkers like Montesquieu, Hobbes, Locke, Adam Smith, Rousseau and Madison was against an oligarchical autocracy which controlled every aspect of human life and endeavor through interrelated public and private legal organizations. The answer in their view was to advocate the replacing of all organizations with an enhanced individual who, when liberated, would be able to develop freely.

The almost two hundred years of political thinking that culminated in the USA consititution, together with an economic and geographic circumstance brought individualization of the social system to its extreme-most point. The supposed ideal state was embodied in the several documents of the independence movement; what emerged was a system where public organizations were restricted, private organizations were not considered and individuals were protected. That this theoretical formulation was an inaccurate perception of reality was soon noted by Alexis de Tocqueville who marvelled at the human propensity to associate themselves for community problem solving; similarly Veblen critically cautioned that the individualistic way of life was being threathened by the uncontrolled growth of private economic organizations.

The British North America Act, in its way, was a pragmatic document reflecting an accommodation of these concerns. No mention was made of individual rights while control over public and private organizational structures was made rather explicit. To guard against the omnicompetent state, which was emerging in the USA after the Civil Wars, the sociopolitical concept of pluralism -- a sharing of collective rights and responsibilities -- emerged. The premise was, and is, that organizations move closely associated with individuals provided for better opportunities for self-government and self-fulfillment than could a distant public body.

Historically, the osscilation between various forms of organizational structure has reflected with a holistic or an individualistic view of human life, with freedom of choice and degree of participation being the indications of which view is prevelant at a given moment.

1.2.6 ROUSSEAU ON INTERMEDIATE ASSOCIATIONS

Rousseau was an atomist; he sought the purest form of human expression which he believed was attainable outside a social system. He also thought that man's greatest defense from the tyranical state was his need (innate) for independence. Consequently, he considered intermediate associations as being mechanisms of the primary association's (the state's) control of the person. His only safeguard against this happening was the multiplicity of intermediate associations with overlapping memberships. Ultimately, Rousseau regarded voluntary associations as both necessary and desirable for the development of personality, morality, knowledge, and wisdom on the one hand and a good state on the other. (Goldschmidt in Pennock, 1969)

1.2.7 THE USA CONSTITUTION AND VOLUNTARY ASSOCIATIONS

The historical development of the U.S. has been characterized by:

1. The constitutionally structuring of an independent collectivity of individuals whose common bound was conceived as being their need to be free from organizational contraints; that considered intermediate associations as being "factional" - Federalist Paper 10.

2. The constitution reflected this and protected its freedoms; in keeping with European thinkers of the period.

3. Such was a rejection of the corporate and dominant structures of the guilds and the state.

4. In less than a century an organizational revolution (Boulding) and the advent of the "Positive State" with affirmative duties to perform (e.g. free the slaves) had emerged.

5. Concurrently, there has been a decline of individualism.

> Indeed, in the last fifty years, the USA Supreme Court, in its outwardly individualistic decisions on civil libertarian matters, has been slowly constructing a theory of group association. Rights cases, therefore, can best be seen as an individual enforcing HIS rights as a member of a GROUP of similar persons.
> (Miller in Pennock, 1969)

6. An interesting sequitor to this is that the B.N.A. Act was written and adopted ("enshrined") at the time of # 4. Reflected the changing importance of secondary organizations, and consequently, supported their development (e.g. provincial rights, "national" corporations: banks, railroads). In like manner, today's talk of constitutional reform is seen as responding, on the one hand, to the demands for protection of individuals -- the power of those same provinces and corporations -- while, on the other, coping with the emergence of an international social and economicsystem where the provinces -- with resources -- consider themselves more capable of meeting the challenges of this emerging reality -- GATT will abolish all tariffs between U.S. and Canada as well as most tariffs with EEC within a decade -- than some national authority.

Organized voluntary effort has had a long history in the United States. After his visit to U.S.A. in 1831-32, Alexis de Tocqueville made these observations:

> Americans of all ages, all conditions, and all dispositions, constantly form associations. They have not only commercial and manufacturing companies in which all take part, but associations of a thousand other kinds -- religious, moral, serious, futile, extensive or restricted, enormous or diminutive. The Americans make associations to give entertainment, to found establishments for education, to build inns, to construct churches, to diffuse books, to send missionaries to the antipodes; and in this manner they found hospitals, prisons, and schools. If it be proposed to advance some truth or to foster some feeling by the encouragement of a great example, they form a society . . . and I have often admired the extreme skill with which the inhabitant of the United States succeed in proposing a common object to the exertions of a great many men, and in getting them voluntarily to pursue it.

Since the days of Tocqueville, voluntary associations have continued to grow and expand and still display many of the same features which he observed; however, over time voluntary associations have progressively withdrawn from those areas -- hospitals, schools, etc -- that the society has come to assume as a collective responsibility and focused on others-- welfare, health, etc -- where descretionary community action is appropriate.

Lord Bryce was also impressed by American voluntary associations when he visited this country many years after Tocqueville. He concluded that associations are "created, extended, and worked in the United States more quickly and effectively than in any other country." More recently, the Editors of FORTUNE, in a book devoted to the subject, concluded that voluntary activities have "a deeper and more lasting effect upon American life, and even American policies, than do the official ones."

The image that people have of an organization will determine, to a great extent, their participation in it. (National 4-H Foundations, 1965)

1.2.8 INDIVIDUALS WITH COMMON UNITY

A preliminary definition of community is a cluster of human beings with some common unity. Such a definition encompasses virtually all types of human groupings which function within a of society. Of course, much is left unsaid. The creation of community is the first result of a human's inability to solve a problem, or satisfy a need, alone. Humans join together in community as a direct response to some sensed need that can not be satiated unless two or more people work at solving the problem, what ever it may be, together ..., in unity.

Such a problem solving centered description of community is essential to an understanding of the unitary function of community associations. Examining any association at any point in time will show that its underlying bond is essentially that of problem solving. Indeed the more difficult the problem to solve, the stronger the bond. Problems do not need to be critical nor difficult nor important, but they do need to represent some situation or circumstance that can be most expeditiously resolved by two or more humans associated in a common unity.

1.2.10 THE STRUCTURES AND PROCEDURES OF DEMOCRATIC SYSTEMS

To establish, maintain and continually revise the social climate in which democratic processes can function and flourish requires a great deal of collaboration in the development of appropriate political, economic, legal, and organizational procedures and structures.

1. The democratic social system must provide opportunities for the wide-spread and continuing participation of

its members in appropriate levels of decision making, planning, and action taking.

2. In a pluralistic social system, made up of many types of individuals and groups, a major requirement is that the system establish procedures to provide full communication for orderly confrontation and conflict resolution, and for the coordination and blending of energies and interests of the desparate subgroups.

3. The continuous and sensitive monitoring of the future, its dangers and potentialities, is a critical responsibility of a democratic system.

4. A democratic system must be sensitive to its many participants varying degrees of needs, desire, and readiness for change; it must also be sensitive to other systems with which it is interdependent.

5. The wide base of involvement in diagnosis and planning in a democracy also provides a wide base of innovation for converting awareness of problems into ideas for change.

6. The basic democratic idea of fairness, of equality of opportunity, suggests that when a new resource for the betterment of living is discovered, there is a commitment to disseminating this resource as rapidly and widely as possible.

7. The development of a productive system requires the rational and flexible use of human resources to fill the leadership and other roles.

8. Everything else can be perfect but still the democratic system will lack quality of operation and productivity unless there is a major commitment to pre-service and inservice training. (The Volunteer Community)

1.2.11 TWO PRINCIPLES OF HUMAN ASSOCIATION

Principles:

1. Shared commitment -individuals are drawn together in familiar, fraternal, mutual concern, neighborhood and community groups because of some shared commitment.

2. The legal principle -individuals are held together in the same kinds of groups because of certain private and/or public legal principles.

Laws:

3. Initially the "shared commitment" will be explicit the "legal principle" implicit.

4. To the extent that an association is seen by its members as being a "shared commitment", it will be hostile to any internal grouping (splinter) dominated by the sample principle.

5. As an association's "legal principle" becomes explicit (and dominant) and the "shared commitment" implicit, then it reaches the stage of development where it can tolerate, and increasingly needs internal groupings sustained by an explicit "shared commitment".

6. The normal development of an association is from "shared commitment" to "legal principle".

7. This development becomes accelerative over time.

8. The conditions of modern institutional life tend to transfer control of the association from the private to public sector. (Fuller in Pennock, 1969)

1.2.11.1 THE CHARACTERISTICS OF VOLUNTARY ORGANIZATICNS

Voluntary associations are those in which a person is free to participate or not, as he chooses. They are open to persons who share a common interest or purpose. They build their own polity and direct their own activities. They contribute toward an alert, concerned, and responsible public.

Such organizations reflect a wide range of interests: cultural, educational, recreational, political, social.

Voluntary associations employ different approaches: Some groups undertake to influence and educate the public; some seek to provide service; some are simply organizations of like-minded individuals who meet together to discuss mutual concerns and to improve knowledge and understanding in a particular field.

They engage in a great variety of activities: educational, recreational, and social programs; social and political action; fund raising; publicity; operating a service or supporting an issue. Many organizations operate through a combination of activities, and much of their work is done in groups, large and small, with meetings limited to their membership or open to the public.

When social agencies work with volunteers, it is not merely to add manpower, but also to strengthen the sense of responsibility which we all should have for each other; for important to our democracy is a concern for responsibility as well as for rights ... The voluntary organization is also a channel through which the dignity of the individual, his rights and responsibilities can be heard and their influence felt on matters pertaining to social policy. (Stenzel, 1968)

1.2.11.2 NEED FOR ASSOCIATIONS

McMahon (1970) states that the premise that collective action is an efficient & effective way for individuals to solve problems within communities. Ross (1955) supports this view when he writes that the individual, through concerted activity with other individuals, may be able to influence the events which shape his environment only through developing meaningful functioning community organizations. Similarly Harper & Durham (1959) say that "community organization ... is a method or process of effecting change." Schaller (1966) follows by saying that it "is also a process through which problems are identified & solutions are developed."

Melvin (1979) defines a community as an area or place where a group of people work, live, play & have their being; community can be described as social or as functional systems.

1.3 NON-FORMAL EDUCATION

Since the term "non-formal" was first coined (Coombs, 1968) a considerable literature has emerged which attempts to describe a kind of educational endeavor that operates somewhere between the formal & the informal.

Contextually non-formal education is:

> ...any intentional & systematic educational enterprise (usually outside traditional schooling) in which content, media, time units, admission criteria, staff, facilities & other systems components are selected and/or adapted for particular students, populations or situations in order to maximize attainment of the learning mission & minimize maintenance constraints of the system (Kleis, 1973).

The efficacy of non-formal educational environments is that that the non-formal learner:

1. Accepts new ideas when they are in a context of priorities & interrelated with other important segments of their lives.
2. Learns more effectively when there is a strong motivation to learn.
3. Participates in learning that requires his ability

to clarify value positions, discern cause-effect relationships, make considered judgements & take responsibility for action.
4. Exercises the ability to select options only within his cultural & social milieu.
5. Turns to people as his major resource (Srinivasan, 1977).

A complex typology of non-formal education includes:
1. Cultural realms (techno-economic-social-ideological)
2. Educational types (enculturation-skill & knowledge transfer)
3. Evolutionary stages (primitive-traditional-modern) (Grandstaff, 1974).

Eight promises, or advantages, in non-formal education for its practioners & leaders.
1. A more effective approach to solving certain problems of education for national development & individual growth.
2. Its education is functional & practical, i.e. related to the life-needs of its people.
3. It maintains a cost effective consciousness.
4. Innovativeness, the mentality that looks for new renewed or rejuvenated approaches to old problems.
5. (It) offers a more eclectic, multi-disciplinary approach to the problem of development in a country.
6. It produces short-term effects as well as long-term ones.
7. (It) assists in decision-making.
8. (It) provides a more rapid & immediate measure of effectiveness of instructional design.

A final definition, found in THE PROGRAM OF STUDIES IN NON-FORMAL EDUCATION (1973), has the four following elements:
1. Non-formal (educational) efforts are outside the formalized, hierarchical structures of the graded school system.
2. Non-formal education is a deliberately planned educational effort, having identifiable sponsorship, goals & programs. It is not "incidental" or "informal".
3. The "non-formality" of an educational effort is taken to reside in its location, sponsorship & administration, but not in either its purposes, its pedagogical character or its credentialing status.
4. Those educational efforts that have identifiable developmental purposes related to the contextual setting in which they take place can be defined ... as "non-formal education for development".

2. INDIVIDUAL LEARNING

Learning is the name of our game. Humans are constantly on the quest of new knowledge, strengthened attitudes, and improved behavior. Much of the time, this is unconscious & unorganized, but none the less it is safe to assume it is happening. Unfortunately, haphazard learning is sometimes reinforced inappropriately & the learner is placed upon a rocky road to ruin. It is important that a coordinator of learners be aware of the elements of learning as they have been described by practitioners and philosophers alike. "Learning to handle change in one's self is essential, since one must be successful in this regard if one is to be able to influence others" (Law, 1979).

2.1 INTRODUCTION TO THEORIES

Learning theory has been a central focus of psychologists since the inception of the discipline about 100 years ago. From that time to the present there have emerged two basic orientations in the conceptualization of what learning is all about. One orientation focuses on the evident conditioning of human response, while the other focuses on the evident "thinking" & consequent diversity of human response, given a particular stumulus or array of stimuli.

The first orientation is generally known as Behaviorism & has been interpreted as Respondent (classical) Conditioning, Connectionism, Operant Conditioning, & Reinforcement Learning. The second orientation can be loosely described as Cognitivism & has variously been interpreted within Existentialism, Pragmatism, Humanism, Configurationalism [Gestalt], and Experiential Learning which is ultimately based upon a mental process which, to a greater or lesser degree, is controlled by the self. While these two groupings were made primarily upon whether or not the value of behaving or that of thinking was paramount, in fact there is considerable intertwining. For example, Existentialists consider that the self is void, until confronted by reality, at which time life -- learning -- begins; this follows straight from Pavlov's respondent conditioning of behavior ! And yet it is the existential view that each human evolves into a unique personality because of the infinite array of experiences encountered, with the consequent result that humans necessarily behave uniquely.

There are generally accepted to be four theoretical individual learning frameworks; each of which has its articulate spokespersons:

1. Behaviorists (Pavlov, Hull, Thorndike, Skinner, Miller)
2. Neo-behaviorists (Hebb, Bandura & Gagne')
3. Cognitivists (Ebbinghaus, Dewey, Piaget, Bruner & Ausubel)
4. Phenomenologists (Rogers, Freire, Hampden-Turner)

Within these frameworks such variations as developmental (Piaget, Knox) are encompassed under cognitive, and dynamic psychoanalytic (Belkin, Gray) under phenomenological praxis (Freire) and synergy (Hampden-Turner). Placed on a continuum the order would be: behaviorist, neo-behaviorist, phenomenologist, & cognitivist; the two in the middle attempting to address the need to include attitude in the learning schema.

Before examining the differences amongst the various theories it is appropriate to review their similarities.

1. Learning is a structured experience bringing about a change in knowledge and/or attitude and manifested in behavior change (Hilgard, Bower, 1967).
2. Learning is an individualized experience, being different for each learner (Glaser, 1957).
3. Motivation initiates & directs behavior; it leads to particular responses which are directed toward achieving a specified goal (Dubin, Okun, 1973).
4. Learning is a discrimination process where the learner recognizes, on the bases of past experience, appropriate response to stimuli, & being able to modify that response if & when it is inappropriate. (Dubin, Okun, 1973)
5. Stimulus - response relationships are complex & learning requires the identification of relevent stimuli in a field
6. The complex field is essentially an environment which encourages or discourages learning. (Knowles, 1973)

Below are some random notes on the question of learning. It is important, as an adult educator, to integrate the various postulates and theorems with your own philosophical orientation, since your views on learning should necessarily square with your behaviors as a facilitator of learning & as a process planner/evaluator.

2.2 BEHAVIORISM

Wilhelm Wundt (1879) began exploring human conscious experience.

John B. Watson, first U.S. Ph.D. in Psychology in 1900 (1878-1958) founder of behaviorism (after Pavlov), learning the result of conditioning behavior, S-R psychologist.

Edwin R. Guthrie (1886-1959), theoretician, little experimentation, deceptively simple; condition responses to stimuli.

Edward C. Tolman (1886-1959), behaviorist, S-S psyhcologist, urged experimentation but did little himself, often used Gestalt terminology.

J. Dollard

D.O. Hebbs

2.2.1 RESPONDENT OR CLASSICAL CONDITIONING

Ivan Petrovich Pavlov (1949-1936), medical doctor (son of a priest, studied seminary, then science, finally medicine) Univ of St. Petersburg, 1883, studies physiology in Germany, held chair in Pharmacology then Physiology at University. Nobel Prize for digestive chemistry. Studies physiological (mechanistic) response (reflex) to stimuli; later years applied conditioning principles to the treatment of psychiatric problems. Empirical observer (influenced by British empiricism), countered the subjective (Freudian) view of psychological-physiological acts; he and over 100 students studied the reflex arc of the automatic nervous system, the viscera: heart, liver, stomach, circulatory system, the intestines, bladder and glands related thereto.

O. Hobart Mowrer (1907-) changed from a reward psychologist to a S-S (after Pavlov) with particular emphasis on hope and fear emotions.

Mowrer of the University of Illinois was a contemporary voice in classical conditioning described the Sign Learning Theory which suggests that the human is conditioned to respond to signs from the environment. The human condition is one of continuous response to a propriorcetive [dissonance] stimulus which has unbalanced his/her equilibrium. The person is constantly in the act of restoring the balance (Mowrer, 1960).

2.2.2 CONNECTIONIST THEORY

Clark L. Hull (1884-1952) long a professor at Yale. Hull probably had more effect on the psychology of learning than any other theorist in the past 30 years.

An ideal theory is a logical structure of postulates and theorems. The postulates are statements about various aspects of behavior. From these postulates, a great variety of other statements, called theorems, could be logically derived. Each theorem could be proved by arguing loqically from some combination of postulates. In order for the theory to have any value as a description of the real world, it is necessary for the actual laws of behavior to be determined by experiments.

The Connectionist system described 133 theorems derived from the 17 postulates.(Hull,)

Basic Postulates: All behavior involves stimulus-response connections. A response is never simply emmited it is always a response to a stimulus.

The Four Stage Analysis: The intervening variables are organized into four stages predictive scheme. The first stage consisted of the independent variables from which he was predicting, the fourth stage of the dependent variables to which he was predicting, and the second and third stages of intervening variables connecting them.

1. INDEPENDENT VARIABLES

   The independent variables include all those that can be directly manipulated by the experimenter.

2. HABIT, STRENGTH AND DRIVE

   The second stage of the analysis introduces intervening variables. These are hypothetical states of the organism that cannot be observed but that are assumed to be directly controlled by the independent variables. HABIT STRENGHTH refers to the strength of the learned connection between a cue or cues and a response, a connection built up through reinforced practice. DRIVE is an activated state of the organism, and a reduction in drive serves as a reward.
   D -- Drive
   SHR -- Habit subscript Stimulus Response
   INCENTIVE MOTIVATION -- K this is reward or reinforcement; but based on a measured value; when the size of the reward increases, K increases, and when the reward decreases, K decreases.

3. EXCITATCRY POTENTIAL

The above variables work together to produce another intervening variable called Excitatory Potential. sEr= sHr x D x K The equation means that the tendancy to make a given response to a given stimulus depends on a habit built up through reinforced practice (sHr) and on two motivational factors, one depending on an internal state (D) and the other on an external incentive (K).

4. DEPENDENT VARIABLES

The fourth and final stage in Hull's analysis is made up of dependent variables, the aspects of behavior that can actually be observed and measured. Three variables relate directly to excitatory potential:

- the amplitude of the response
- the speed of the response
- the total number of responses that will occur, after reinforcement is removed, before extiction is complete.

OTHER POSTULATES AND COROLLARIES

5. THRESHOLD

This implies that in many cases these will be an initial period of learning experience in which apparently no learning is taking place. Learning is occuring, but it is not yet apparent in behavior. This is because the combination of sHr x D x K gives a smaller value of sEr than the threshold value. An increase in any of the intervening variables might be enough to take it over the threshold, and a response will occur on the next presentation of the stimulus.

6. OSCILLATION

Refers to the assumption that any given amount of excitatory potential is not an exact value but the average of a random distribution of values. In other words, the oscillation in the value of sEr is rapid and random following approximately a normal distribution.

7. REACTIVE INHIBITION

This is the tendancy not to repeat the response that has just been made. The total amount of Ir against a given response increases each time the response occurs but decreases with the passage of time. It is for this reason that subjects usually perform better on a learning task involving a lot of effort if their practice is distributed with short periods of practice and rest.

There is a derivative of reactive inhibition called conditioned inhibition. This is abbreviated sIr to indicate that it is a kind of habit connecting stimulus and response.

8. SECONDARY REINFORCEMENT

A neutral stimulus paired with a sudden reduction in a drive stimulus, the neutral stimulus tends to acquire the reinforcing properties.

9. SECONDARY DRIVE

A neutral stimulus that is paired with pain soon acquires drive properties, and the drive it produces is called fear.

10. FRACTIONAL ANTEDATING GOAL REACTION

Is one that occurs before the individual gets to the goal and involves an anticipation of the goal. Abbreviated rG.

11. DISCRIMINATION LEARNING

This means that the individual must learn to respond to the stimulus which at first has a weak excitatory potential and not to respond to the one which initially has a high excitatory potential.

12. COGNITIVE PREDICTION

Hull derived a number of theorems dealing with insightful problem solving. To Hull these operations were based upon fractional antedating goal reactions. He dealt with free space operations and barriers through a system of trial and error operations and detours. These two created habit-family hierarchy. Different habits leading to the same goal come to form a habit family.

(OPERANT CONDITIONING)

13. REINFORCEMENT

A stimulus provided after a desired appox of behavior performed by operant respondent.

14. DISCRMINIATED STIMULUS

Any stimuli that accompanies a drive stimulus and is a condition required for the behavior to occur. Rat presses bar in light but not in dark Stimulus Discrimination

15. SECONDARY REINFORCEMENT (SR)

Any stimuli that accompanies primary reinforcer.

16. SECONDARY AVERSIVE STIMULI (SA)

Pain - bar wired - rat pained response suppress.

17. CONDITIONS FOR BEHAVIORAL CHANGE

Deprivation
Schedules of Reinforcement
Continuous & Intermitten
Ratio Schedules
Interval Schedules
Fixed Schedule
Variable Schedule

18. BEHAVIORAL MODEL

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      SD
      S    R   Re
R      SA      SR  R
               SA
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2.2.3 INSTRUMENTAL LEARNING OR OPERANT CONDITIONING

(Thorndike, Skinner & Miller)

The basic concepts were that one learned by a stamping-in process and not by an intellectual process. Learning took place more quickly if one were satisfied & not annoyed. (Thorndike) Also there were only two kinds of learning: respondent & operant. (Skinner) Since respondent learning happened anyway education need be concerned with operant learning.

The Skinner box was developed for animal experiments and used positive and negative reinforcers. Programmed readers and booklets came from 'shaping', the process of getting someone to do what is wanted.

Working along the same idea, it was found that children learned by imitation. (Miller) Using a different vocabulary Miller believed in drive, cue response and reward. Much behavioral experimentation was conducted in the laboratory with animal experiments.

Edward Lee Thorndike (1874-1949) Am. Psyhologist strongly influenced education towards a social utility mode thru experimentally derived principles (laws) of learning. All but one year of his productive life was spent at Teachers College, Columbia U, authored or co-authored 500 books including the first Educational Psychology (3 vol).

The School of Operant Conditioning or Instrumental Learning was founded as the result of discovering the value of reward to the learning of skills.(Thorndike) From hedonistic pleasure-pain principle he developed the scientific credo called satisfiers and annoyers.

Burrhus F. Skinner (1904-) empiricist, systematic views of learned behavior, interested in the function of reward in order to reinforce a desired behavior.

> A more practical suggestion is that the learner responds to a stimulus, then it is necessary that a series of reinforcements be applied to support the modelling of a particular expected behavior. Thus learning becomes the behavioral outcome of certain attitudes, knowledge, & skills (Skinner, 1971).

Underlying this approach is the premise that all behavior is determined by its consequence. Learning does not occur because behavior has been stimulated; it occurs because, stimulated or not, it is reinforced.

Two concepts lie at the heart of operant conditioning:
1. the law of effect &
2. the law of shaping repetition. In determining the desired performance and the appropriate behaviors, we must be able to make the connections between the effects sought and the behaviors which lead to them.

Since competence in behavior is the purpose of education, it is important to arrange enough positive reinforcement, either in the environment or for the learner, to nuetralize the adverse consequences of a lot of hard work & high risk. (Murphy,)

Reinforcement is the only situational condition in behavior. Some guides to the use of reinforcement (SR) are:
1. do not use aversive SP
2. do not SR undesirable behavior
3. SR early & often
4. SR immediately after response
5. establish secondary SRs
6. extinquish undesirable responses by witholding SR
7. develop SR schedule carefully when shaping

& when the learner fails accept some of the responsibility. (Dubin,Okum,1973)

The group setting provides a rich behavioral resource that can be used for positive reinforcement. While the self-directed learner can operate within the operant framework, the teacher [trainer, instructor] is able to prescribe extensive & detailed methods & sequences of learning activities which can be very helpful for the efficient development of specific skills or knowledge. Within this framework terminal behaviors must be expressed in precise terms. (Gagne, 1965) The task of the teacher is to arrange contingencies of reinforcement (Murphy,). Contingency management is where reinforcement is made contingent on a certain behavior.

2.2.4 PSYCHOLOGICAL MODELING [NEO-BEHAVIORISM]
(Bandura, Gagne, McClusky)

Learning processes are the intervening variables between conditions & outcomes. Because of the uniqueness of individuals provision must be made for difference in the learning process. Thus, it is imperative to expose the learner to as wide a variety of experiences as is possible so s/he can decide for her/himself which one is most appropriate. The experience need not be performance based. Essentiall, however, is the contiguity between a response & its shaping reinforcement. Also important is the isolation of very specific skills, thoughts or feelings that are to be learned. Effective learning is the result of achieving, bit by bit, mastery over elements to be learned. This suggests, also, that learning can be appraised in its process, rather than at the outcome. A MODELED EVENT is divided into:

1. ATTENTIONAL PROCESS
   Modeling Stimuli
      Distinctiveness
      Affective Valence
      Complexity
      Prevalence
      Functional Value
   Observer Characteristics
      Sensory Capacities
      Arousal level
      Motivation
      Preceptual Set
      Past Reinforcement

2. RETENTIONAL PROCESSES
   Symbolic coding
   Cognitive Organization
   Symbolic rehearsal

Motor rehearsal

3. MOTOR REPRODUCTION PROCESSES
   Physical capabilities
   Availability of component responses
   Self observation of reproductions
   Accuracy feedback

4. MOTIVATIONAL PROCESSES
   External Reinforcement
   Vicarious Reinforcement
   Self Reinforcement

5. MATCHING PERFORMANCES
   in order to achieve MATCHING PERFORMANCES

The reinforcement theory then is: Stimuli (modeling) --R--S (reinforcement) --R
While the Social Learning Theory, that is (OBSERVATIONAL LEARNING) is:
Anticipated S (reinforcement)--Attention--S (modeling stimuli) (Symbolic Coding, Cognitive Organization, Rehearsal)--Response

2.2.5 OPERANT LEARNING MODELS

1. PROGRAMMED INSTRUCTION (Skinner) facts, concepts, skills.
2. MANAGING BEHAVIOR (Skinner) social behavior/skills.
3. RELAXATION (Rinn, Wolpe) personal affective goals, reduction of stress, anxiety.
4. ASSERTIVE TRAINING (Wolpe) expression of feelings in social situations.
5. SIMULATION (Link, Guetzkow, Glasser) concepts & decision making skills.
6. DIRECT TRAINING (Lumsdaine) patterning behavior, skills.

2.3 COGNITIVISM

The focus of cognitivism is on an individual's thinking process, on how a person comes to know something.

Ebbinghaus invented nonsense syllables to study memory, controlling for heterogenity of other verbal material & the idiosyncratic meanings that stories or poems possess for individuals.

There is little relationship between human concept formation & animal leaning, even with chimpanzees. (Terrace, 1979)

The overwhelming consensus today is that human concept learning is central to rational thought.

The state of peoples development, together with its rate and direction depends largely upon what is on the minds of its members and above all upon the contact of the minds of its elites, which reflect in part, as do all civilizations, the conceptions men form of the universe (Spengler,).

The process of learning begins when the learner discovers a descrepancy between habitual behavior & current reality, this necessitates the invention of new models of behavior which are then tested in specific situations. If there continues to be a discrepancy then the learner repeats the process until a particular model is confirmed. It is then generalized to a habitual behavior pattern (Argyris, 1976).

A man demonstrates his/her rationality, not by a commitment to fixed ideas, stereotyped procedures, or immutable concepts, but by the manner in which, & the occasions on which, s/he changes those ideas, procedures & concepts. (Toulmin, 1972)

The educated guess is encouraged so as to direct the thinking process from the known to the unknown. In the process, there are innumerable thought configurations that might lead to a specific objective, since learning is fundamentally a restructuring of old knowledge to accommodate new findings. Deductive reasoning is an acceptable proceedure. Distinctness is appropriate. (Ausubel,)

Socialization & cognition are interlocked through language.

Learners tend to organize their perceptual fields according to the laws of:
1. time &/or space proximity
2. figure-ground pattern similarity & familiarity
3. closure or satisfying equilibrium
(Hill, Nunney, 1971)

Acquisition is based upon the assimilation of new knowledge into existing structures (Belkin, Gray, 1977).

Learning is a matter of arranging a sequence of problems that flow according to organic states of development; [teaching is the] providing of appropriate resources for the solving of the problems by the learner. (Bruner, 1966)

There needs to be a continuity of learning with a vertical integration of major elements over time. There must be a horizontal relationship of elements, so as to provide a unified view & unified behavior. (Tyler,)

While activity is regarded as basic to all mental development; however, there should be a close relationship between the activity & the cognition taking place, e.g. writing, articulating, in an interactive environment.

Ultimate learning is evidenced by the production of solutions to new problems (Belkin, Gray, 1977); or that the information learned is dissociable, that is applicable in other contexts (Ausubel, 1973).

> Physical & social phenomena exist independently of men's efforts to understand, define & describe them. The moon, as a physical reality, existed prior to man's recorded history; yet only recently has it been described with any degree of certainty. Similarly, education as a social reality had existed in its rudimentary form as long as man himself; but only recently has it been specifically defined & institutionalized. So has it been with adult education -- perhaps the adult educator like the astronaut is now bringing to the object of his concern [adult learning] the powers of observation & analysis required for accurate definition & description (Scroeder [cited in Smith, 1979]).

Learning behavior is an "... internal process controlled by the learner & engaging his whole being, including intellectual, emotional physiological functions" (Knowles,).

Cognitivists emphasize that humans are unique because of their mental faculties. The mind, in their view, is a highly developed storing, sorting, and retrieving mechanism, and as well has the power of knowledge creation and actualization. Thus humans are because they think (Descartes,), and whether or not they choose to behave is secondary. Cognitivists conceive of learning as a developmental and cyclical process that continues and is enhanced. Cognitivists also consider that the phenomenon of learning can best be described as being a spiral, where multifaceted learning takes place on ever widening dimensions with each revolution. The educated guess as to answers or solutions is an essential part of this inductive process (Bruner,).

New learning is highly dependent on the adequacy of relevant concepts & that concepts derive increasing meaning as they become integrated into progressively more complex conceptual frameworks. (Ausubel,1963) The seven concepts in the assimilation theory of cognitive learning are:

1. Rote learning - arbitrary, verbatim incorporation of new information into cognitive structure.
2. Advance organizer - a brief, meaningful learning task designed to help the learner link new specific knowledge to relevant concepts or propositions s/he already knows.
3. Progressive differentiation - elaboration & clarification of meanings of concepts or propositions occuring over time as new subsumption, integrative reconciliation and/or superordinate learning occurs.
4. Superordinate learning - new concepts or propositions acquired that relate the meanings of two or more related, less inclusive ideas.
5. Integrative reconciliation - new learning that results in explicit delineation of similarities & differences between related, less inclusive ideas.
6. Subsumption - incorporation of new knowledge into a specifically relevant existing concept or proposition.
7. Meaningful learning - new knowledge is consciously linked to existing specifically relevant concepts & propositions in cognitive structure & incorporated into these concepts.

Learning moves higher on the rote-meaningful continuum when the various processes are facilitated. (Ausubel, 1963)

There is an attractive parallel between Ausubel's description of "ontogenic" development of concept meanings by an individual as s/he matures & the "phylogenetic" (Toulmin,1972) development of concepts & principles.

The Conceptual Systems Theory describes human development in terms of increasingly complex systems for processing information about people, things, & events. Growth is "an interactive function of the persons' level of personality development & the environmental conditions he encountered." Optimal development occurs when the environment facilitates the "conceptual work necessary forthe person's conceptual growth." (Hunt, Hardt, 1969)

2.3.1 CONCEPTUAL LEVELS & TRAINING ENVIRONMENTS

1. LOW COMPLEXITY characterized by extremely fixed patterns of response. The learner tends to see things evaluatively, in terms of right or wrong, & he tends to sterotype the world. The optimal training environment (OTE) needs to be well structured in order to avoid creating greater rigidity.
2. MODERATE COMPLEXITY characterized by a breaking away from rigid rules & beliefs; active resistance to authority; continues to dichotomize the environment; has difficulty seeing other points of view; has difficulty maintaining a balance between task orientation & interpersonal relations. OTE needs to emphasize negotiation in interpersonal relations & divergence in the development of rules & concepts.
3. MODERATELY HIGH COMPLEXITY characterized by a reestablishment of easy ties with people; accepting other points of view; balancing alternative courses of action; bridging different points of view. OTE needs learning within interpersonal dynamic situations.
4. HIGH COMPLEXITY characterized by the maintenance of a balanced perspective with respect to task orientation & the maintenance of interpersonal relations; building of new constructs & beliefs; able to negotiate with others the rules or conventions that govern behavior under certain conditions. OTE needs are for an interdependent, information-oriented, complex environment. (Schroder, Driver, Streufert, 1967)

Cognitive development theory (Piaget) has demonstrated in children who are beginning to conceptualize the stages in a human's thought development. It was found that age correlates closely with stages in cognition; the subject moving from very concrete perceptions to increasingly abstract ones. Complementary to this is the important proceedure known as cognitive mapping developed at Oakland Community College (Hill) & elsewhere.

There are four factors that serve as propellants to mental development:

1. Maturation of both nervous & endocrine systems which provides for the physical capability
2. Experience involving action on the part of the learner aids in the discovery of the properties of the objects & the development of the organizational skills
3. Social interaction which offers the opportunity for observation of a wide variety of behaviors

4. An internal self-regulation mechanism that responds to environmental stimulation by constantly fitting new experiences into existing cognitive structures [assimiltion] and revising these structures to fit the new data [accommodation]; a balances between assimilation & accommodation maximizes cognitive functioning. (Piaget cited by Webb, 1980)

The development of the cognitive structures, or schemas, is related closely with age. The sensori-motor stage [0 - 2] is when the individual begins to uses his/her senses & emerging motor skills to explore the environment. The preoperational stage [2 - 7] is when the individual is "perceptually bound"; s/he is unable to reason logically concerning concepts that are discrepant from visual clues. Her/his thinking is hampered by such factors as egocentrism, centering, & an inability to follow transformations & perform reversals. The concrete operational stage [7 - 11] is when the individual is able to use this logic to analyze relationships & structure his/her environment into meaningful categories. Finally, the formal [abstract] operations stage [adolescence] is when the individual develops the ability to manipulate concepts abstractly through the use of propositions & hypotheses. (Piaget cited in Webb, 1980)

A man demonstrates his rationality, not by a commitment to fixed ideas, streotyped procedures, or immutable concepts, but by the manner in which & the occasion on which he changes those ideas, procedures & concepts. (Toulmin, 1972)

Understanding is the relationship between the events or objects we study, the conceptual frameworks that guide our work & the resultant claims of our inquiry; a simple heuristic device known as the "Epistomological V" illustrates the key elements in the structuring of knowledge:

CONCEPTUAL Active Interplay METHODOLOGY
THEORETICAL Focus
Philosophy Question Claims:
Theory Value - Knowledge
Principles Transformations
Concepts Records
EVENTS - OBJECTS

A nueropsycological structural model of cognitive processing has been represented as follows:

NUEROLOGICAL	COGNITION	AFFECT	ACTION
subcortical	sensori-motor	drive	somatic
limbic	presentational	anxiety	segmented
neocortical	representational	feeling	purposeful

```
asymmetric      symbolic     self-aware  volitional
  neocortical                              differential
                                           asymmetical
                                     (Brown, 1977)
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Perception is a process for making increasingly more specific a generalized object. (Brown, 1977)

If ever the man shudders at the alienation & the world strikes terror in his heart, he looks up & sees a picture. There he sees that the I is embedded in the world & that there is really no I at all ... of he sees that the world is embedded in the I, & that there is really no world at all ... But a moment comes, & it is near, whern the shuddering man loos up & sees both pictures in a flash together. And a deeper shudder seizes him. (Buber,)

Perception, action & space reach out into space around the body. The body as the the global somatic referent of the thought that seeks to realize itself in action. (Brown, 1977)

Grief, joy, thought ... in our art all becomes action. (Rodin,)

Action strives towards the highest attainable end-stage, behavior does not simply reflect this terminal stage but is a composite of all stages as the unfold over time. Thus, gesture, gait, body motion, facial nmimic, even tics are manifestations of the forming action of earlier stages. The total act, therefore, is represented not by a single utterance or specific performance but by the entire microgenetic structure that is traversed in its elaboration. The action is formed out of the same ground as thought affect; each helps to elaborate the other. (Brown, 1977)

The perception achieves a delimitation in abstract space & become a veridical object; the action undergoes an increasing specification toward a discrete performance with the distal extremity on objects in a space apprehended as real & extrapersonal. The object has been exteriorized & seems to be dissociated from self. As the object proceeds outward, however, space also becomes more articulated. The object, & the space of the object, "separate" [from the self] together. The object is distinguished from the self, & the self can also be apprehended as an object. (Brown, 1977)

The psychological distance between action & perception becomes greater as action & object develop further out of psychic life. The development proceeds to the point at which action & object seem to be set against cognition as a whole. There is also a progression from purposive to volitional action. Consciously directed action [volition] is bound up with language development. (Brown, 1977)

Action has already been exteriorized to a position in extrapersonal space. Language [speech, written] is a higher form of action & seems to inhabit a different space; this is also true of speech perception. This new space is intrapersonal; its articulation creates interpersonal field of mind "consciousness". These spaces are closely bound up with affectivity. Moreover, the awareness experience is closely bound up with affectivity. It is the intrapersonal derivation of the affective flow that accompanied the object out into the world. The higher affects -- as ideas -- are forms of self-evaluation deriving from this unitary arborization of affect, awareness, & language together into a new inner or private space. (Brown, 1977)

My words simply give other people a chance to remember what they already know. (Rodin,)

In its development, language must continually repeat the past. Language also develops as a part of existing cognitive structures. It employs these structures & carries them one stage further. Language does not enlarge the world through our ability to describe it. Rather, language is one expression of an extension of cognition into the world. The object for which language provides a name & a concept is not there waiting to be named. In a very real sense, cognition creates the world that language seeks to describe. (Brown, 1977)

If a man cannot grasp the matter let him be still the matter will grasp him. (Suso,)

Mind has emerged in this natural way from unconscious to vital activities. The laws of this emergence have not been discovered. (Herrick,)

The world does not come to us as a given, fully formed & waiting to be preceived; rather, it is an achievement that must be constructed by active processes. The world becomes objectivized by grades. Perception strives towards the realization of models in the abstract that can be taken for external things. (Brown, 1977)

Awareness experience is the configuration of components [action, perception, language] within a particular cognitive level. Awareness achieves a level common to that of dream. The awareness experience takes on direction by virtue of a progression toward an object or an action, but the awareness is still embedded in the object itself. The object does not exist as an entity fully independent of the self. There is incomplete distinction of self & object because they inhabit one space. Possibly some apprehension of time passing can occur. The isolation of content in an immediate present, from a coterminous background, seems to be essential for at least some intuition of duration. (Brown, 1977)

The chief thing that makes life a failure ... is the fact that one can never repeat exactly the same emotion. (Wilde,)

Affect is the configuration of the content of a particular component [action, perception, or language]. (Brown, 1977)

Thought is the production [generalizing] of a class of objects based upon the perception of specific objects. Thought & memory are different terms for a common process. Thinking is a way of characterizing certain aspects of memory while remembering is a way of characterizing certain aspects of thought. They are directional features of the essential components of cognition -- action & perception, of which language is a derivative -- but are not themselves special functions. At an early stage, in cognition, the expression of a thought is direct, global, immediate. Subsequently, the content passes through "layered" semantic fields; the end-point being the attainment of representational adequacy. Later stages of thought are bound up with "spatial" & "categorical" thinking. In the final stage -- the symbolic phase of thought development -- cognition is elaborated through language into a new space. Memory, on the other hand, is the articulated reproduction of perceptions & thoughts. (Brown, 1977)

I do not recognize memory in the sense in which you mean it. Whatever we encounter that is great, beautiful, significant, need not be remembered from outside, need not be hunted up & laid hold of as it were. Rather, from the beginning, it must be woven into the fabric of our inmost self, must become one with it, create a new & better self in us & thus live & become a productive force in ourselves. There is no past that one is allowed to long for. There is only the eternal new, growing from the enlarged elements of the past; & genuine longing always must be productive, must create something new & better. (Goethe,)

Creative thinking & mnemic memory; these are the productive & reproductive aspects of cognition. Creativity demands the gradual assimilation of thinking in the direction of a new point of view -- thought. It doesn't often come at the onset of thinking but after a time of incubation. There is a close relationship to dreaming where semantic fields are integrated in an uncommon patter that contains its own meaning. Creative expression requires a restructuring of the whole network of semantic interrelationships at all levels of the nuero-psychological model of the brain. (Brown, 1977)

Creativity [genius] ... is only a slight derivation from the ordinary. (Goethe,)

All the many images do not designate, but cloak & conceal the imageless One, which stands behind them & toward which they strive in vain. (Cassirer,)

Genius has essentially to do with the fact of poetic intuition taking shape in the inaccessible recesses of the sould at an exceptional degree of depth. (Maritain,)

Artistic conception ... is not a transitional phase of mental evolution, but a final symbolic form making relevations of truth about actual life. (Langer,)

In the creative person, inspiration is a profound & inexpressible experience (Brown, 1977); an intuitive pulsion (Maritain); subliminal uprush (Myers); the scheme appearing in the "mind's eye" (Namier); the symphony heard in its entirety prior to composition (Mozart); the story apprehended whole with irredeemable clarity before the parts are executed (Milton); the "Eureka Process" occuring when two different lines of thought converge. When composition begins, inspiration is already on the decline. (Shelley,)

Consciousness corresponds to stages in the development of the object world. The realization of an object world implies a purposeful behavior in that world, & of an action motility on that object. In perception it appears as an end-stage, in an action it appears as a goal. In perception, the object is a product that seems to be passive to the act, while in action motility is the product, & it seems to be active in relation to the object. The behavior is judged purposeful when both action & object are toward a common goal. Through language, purposeful behavior can become volitional. (Brown, 1977)

Through language, purposeful behavior can become volitional. The distinction here is between an action tht is ostensibly directed or motivated toward a goal & an action that is obedient to a will. Volition is an act of reflection tht has an action as its object. Will is a way of describing the self in this reflective state. In relation to the formation of SELF, volition is an advance over purposefulness. (Brown, 1977)

Volition is a stage in the course of action development. The idea of free-will demands that a choice is available to a conscious self. The conscious self [or self-in- awareness] does not cause another cognitive state, it does not choose something but rather gives way to another state rising from below. In a very real sense, each conscious moment ... dissolves away in the continual emergence of new form. (Brown, 1977)

2.3.3 INFORMATION PROCESSING LEARNING MODELS

1. INDUCTIVE THINKING INQUIRY TRAINING MODEL (Taba, Suchman) development of inductive mental processes academic reasoning or theory building; useful in personal & social goals as well.
2. SCIENTIFIC INQUIRY (Schwab) development of a research system of a discipline.
3. CONCEPT ATTAINMENT (Bruner) development of inductive reasoning, also concept development & analysis.
4. ADVANCE ORGANIZER (Ausubel) increase the efficiency of information processing capacities to meaningfully integrate related bodies of knowledge.
5. MEMORY (Lucas) increase capacity to memorize.

2.3.4 LEARNING CYCLES

The pragmatic learning theory complemented progressive school movement. Beginning with observation of reality the learner is prompted into analytical inquiry, which in turn leads to reflective evaluation, and ultimately a testing of the new synthesis. Learning was considered to be a cyclical process with each new synthesis becoming a closer approximation of the desired behavior; pragmatists are equally adamant in insisting that the learner continually assess the validity of the particular learning experience (Dewey, 1957).

Learning is considered to be cyclical (Bruner); with a gradual expansion of knowledge at the same time there is a growing depth to understanding. The Learning Cycle similarily points to the human need to begin with a concrete experience, which is followed by a period of reflection & observation, then the learner seeks to conceptualize & generalize from the experience, & ultimately arrives at some testing of the new basis for action (Lewin; Brunner).

A distinction must be made between learning activity on the one hand, and on the other hand, the learned- content as that toward which learning-activity is directed. (Colaizzi, 1978)

This "learned-content is a meaning-idea which refers to and signifies a meaning of reality ..." (Colaizzi, 1973) for the learner.

> Just as our lives unfold temporally, so too is genuine learning a temporal unfolding which can never be absolutely completed. (Colaizzi, 1978)

In everyday experience each of us operates from our personal view of reality, or "meaning perspective" (Merzirow, 1979), which filters our perceptions and enables us to

The inquiry method of teaching leads students to engaging in acts of discover, a process which has (Bruner) four benefits:

1. increasing intellectual powers
2. shifting from extrinsic to intrinsic rewards
3. learning the heuristics of discovery
4. making material more readily accessible in the memory.

Examining the cognitive learning experiences of graduate students (Taylor,1978) found that the learner enters the experience in a detached mode. In order to move into the next stage there is a disconfirmation of knowledge & a confrontation with relevant unknowns; the learner's response is one of divergence. This is often a movement of anxiety & confusion for the learner. Once the issue is named, there is a period of relaxation with the unsolved issue & a desire for engagement. After the learner is saturated with the issue, there ensues a period of withdrawal and inquiry. This is a period of reflection & review of the experience; & often insight. After reflecting, the learner moves towards a convergence where the new learning is integrated through a sharing with significant others for validation of the new synthesis.

It is suggested (Kolb, 1971) suggested that there are four steps that the learner tends to follow, while undertaking to learn some solution to a problem; learning then is a four stage cycle.

> Immediate, concrete experience is the basis for observation and reflection. These observations are deduced. These implications or hypotheses then serve as guides in acting to create new experiences.

It is further enunciated that humans have a propensity to work more effectively in one or two of the stages & superficially in the others. However, learners ought to strive to enhance their skills in all four areas in order to learn more effectively.

2.3.5 FUNCTION OF REPETITION

1. Connectionist'
   Repetition of event does not modify the SR connection.

(Thorndike)
Conditioned reflex strengthened with repetition. (Pavlov)
Contigious repetition generates inhibition. (Hall)
Practice assimulates or alienates cues depending on reinforcement family of S and R. (Guthrie)

2. Operant
Conditioning achieved through repetition, depending upon reinforcement. (Skinner)

3. Phenomenology
Changes in S and R linkages go within repetition, not as a result of repetition.

2.3.6 UNDERSTANDING

Being able to integrate a variety of responses to stimuli when:

1. new information is understood at once it is a matter of transfer. (Thorndike)
2. past experience is utilized. (Pavlov)
3. Repetoire of response furnishes surrogates. (Hall)
4. [Problem soving] the manipulation of a variable may lead to the emission of a response. (Skinner)
5. there is an awareness of relationships between the parts of a whole. (Phenomenology)

2.3.7 TRANSFER

Being able to react in a new situation; "new" stimulus "old" response.

1. Reaction to new situation benefits by identification of parts similar in old situation. (Thorndike)
2. Result of generalization where I stimulas evolves conditional reflex learner for another stimulas. (Pavlov)
3. Equivalent stimulas equivalent response. (Hall)
4. Common elements. (Guthrie)
5. Induction [generalization] basic for tranfer. (Skinner)
6. Dynamic relationship discovered in 1 life space applicable in another. (Phenomenology)

2.3.8 PROBLEM SOLVING CREATIVITY AND COGNITIVE STYLE

Configurational [Gestalt] field theorists, (Wertheimer, 1912; Kohler, 1929) believe that experience is rooted in insightful behavior and that experience is man's way of interacting with his perceived environment. Creativity is often described as the "aha!" moment. From an experience, an insight is derived, which then can be conceptualized & generalized (Harrison, 1967).

> Creativity has been defined as recognition of an underlying relationship between apparently diverse phenomena. Creativity takes one of two general forms. It may involve seeing how two different pieces of information relate to one another, or it may involve seeing how a piece of information relates to a problem. The first kind of creativity results in recognition of a phenomenological link or pattern. The second kind of creativity results in the solution to a pragmatic problem. The more obscure the relationship between two phenomena, the more creative the act of recognizing or understanding how they relate to each other.
>
> A second and complementary element in our view of creativity is "differentiation ability," the capacity to perceive differences within a given body of data. People whose differentiation ability is low tend to see the world as more uniform than it is, emphasizing its standard, regular, predictable elements. High differentiators, by contrast, emphasize the diversity and variation in the world and pay special attention to anomalies or apparent inconsistencies.
>
> Differentiation is the opposite side of remote association: you cannot combine apparently diverse phenomena without first recognizing them. To put it most simply, differentiation is involved in perceiving a problem, and remote association is involved in solving it.
>
> Our concern in working with these concepts is to examine the relationship between cognitive style and creative problem solving. We think this work relates to the emerging body of literature on right and left brain function. We postulate that differentiation ability might very well be a right brain function and remote association ability a left brain function, however, rather than deal with dominance, our findings relate to competence. The evidence indicated that for differentiation and remote

association, threshold levels occur and that creativity is associated with abilities rather than dominance. Thus, to the extent that there is an association between these concepts and the work on left and right brain, it would lead us to rephrase the right-left brain performance dialogue in terms of adequacy rather than performance.

From a more pragmatic, less speculative perspective, our findings bear on the social nature of creativity. It would appear then that the creative act involves both the identification and solution of a problem and, thus, in coordinating the mix of human resources working together both the ability to make remote associations and to differentiate must be present. Our findings indicate that the creative act often results from the interaction of persons with different cognitive skills. Work groups whose leaders are high differentiators and whose group members are high remote associators tend towards creative problem solving. This provides cues for fostering not only creative work teams, but maximizing an individuals ability to contribute to creative problem solving.

The "real" difference between "muscle" and "mind" workers, then, is not the distinction between "overt" and "covert" behavior or between "operant" and "cognitive" behavior, but, instead, is the variation between the directness and the immediacy of the effects of their behavior.

If there is a central point around which my concerns might be clustered, it is our preoccupation with the behavior of others. When the effects we sought were (and, sometimes, still are) the direct and physical behavior, then, for all practical purposes, we could (and can) treat behavior and performance (the means and the ends) as one and the same. But when the effects we seek to create are indirect and delayed, then we must identify the linkages between these effects and the behaviors which lead to them before we can prescribe or proscribe activities for others. Without first knowing these linkages, efforts to influence the behavior of others takes on a distinctly religious character, that is, they are "acts of faith".

Any study of behavior, therefore, is pointless and bound to be fruitless unless it is accompanied by a corresponding study of its desired effects and the environmental conditions under which they are to be achieved. We must study the entire performance system, not just one of its elements in isolation.

Two questions are central to performance and instructional- related efforts:
1. What are the desired effects?
2. How are they produced? (Gerald, 1979)

Concepts change over time & that major advances in thought occur when old explanatory concepts (paradigms) are overthrown & replaced by new ones. (Conant, 1947; Kuhn, 1962) A contrary view is that paradigm overthrow seldom or never occurs & knowledge production can better be characterized as an evolutionary process where new concepts are derived through occasional invention, or through gradual modification or "hybridization" of previous concepts. (Toulmin,1972)

There will probably be no serious objection to the proposition that insight consists in a (rapid) reorganization of the field, since that may fairly be called self- evident. It is not at first glance so obvious that ALL learning consists in the reorganization of a field, since in many cases the process occurs very slowly. (Adams, 1931 in Colaizzi, 1978)

2.5 PHENOMENOLOGY

[SEE GLOSSARY FOR DEFINITION]

The major contributors to this theory have been the humanist clinical psychologists. They are concerned with the study and development of fully functioning persons (Rogers) or self-actual persons (Maslow). Existence preceeds essence. The focus of learning is in social development, communication skills, & sensitivity to beauty, rather than problem solving adjustment.

What is learned, then, is not discrete, unrelated facts separate from the self, but a new meaning perspective or "style of existence" (Hamden-Turner, 1970), which included the self and through which subsequent experience is ordered.

> ... what we genuinely learn we follow through on as a LIVEABLE IDEA which bears on the unfolding MEANING of our existence ... (Colaizzi, 1978)

Moreover, a person's expression of intention to enter into the process of inquiry is not based on a knowledge of its outcomes. Rather the learner engages in an immediate reality which is experienced to be indeterminate, emergent and open-ended. (Taylor, 1979)

Since knowledge "characterizes self in relation to the world" (Torbert, 1972), learning involves a transformation in one's view of self, as part of the world.

> The formation of the self, then, must also be understood in relation to both the ongoing organismic development and the social process in which the natural and the human environment are mediated through the significant others ... the self cannot be adequately understood apart from the particular social context in which ...[It was] shaped. (Berger and Luckmann, 1966)

A world view or perspective provides the basis from which one acts. A change in this perspective not only involves a change in how one views oneself, but also is likely to effect some change in how one acts, since "the form of action men adopt is to a large extent a function of how they perceive themselves in the world." (Freire, 1968)

As the learner is transformed through learning a new meaning perspective or world view, the world is also transformed.

> ... the relationship between knowledge and its social base is a dialectical one, that is, knowledge is a social product AND knowledge is a factor in social change. (Berger and Luckmann, 1967)

2.5.1 PRAXIS OR EXPERIENCE: ACTION/REFLECTION

[SEE GLOSSARY FOR EXPERIENTIAL LEARNING]

Learning is human praxis. First there is an action to resolve a confronted problem then a period of reflection when the results of the action are evaluated, then another action to further solve the problem. This action-reflection-action continues as long as is necessary to resolve the problem at hand. The process (Freire, 1974) is one of human development through the codification of perceived reality, decodification or analysis of the code, & a recodification of that reality into manageable parts.

Praxis is the connecting of action to reflection where the former, alone, leads to ineffective action and the latter to "verbage" or disconnected theory. Through praxis the two modalities continually interact and adapt to the other.

> Men will be truly critical if they live the plenitude of the praxis, that is, if their action encompasses a critical reflection which increasingly organizes their thinking and thus leads them to move from a purely naive knowledge of reality to a higher level, one which enables them to perceive the CAUSES of reality. (Freire, 1968)

The educated adult is a responsible member of society capable of making decisions, both implicit explicit choices, & being critical when there is conflict between choices. "Perhaps wisdom consists of knowing when & how to effectively be proactive & reactive from situation to situation." The most desireable course of action is for a person to meet crises head on, solve problems in self-educated ways, obtain assistance only when needed, & grow in the process. (Knox, 1977) Similarly, adults make frequent use of the "discovery method" as a strategy for problem solving (Belkin, 1977), as they are very capable of formulating their own objectives (Knowles, 1970).

Experiences are essentially proactive elements of learning which focus the learner on what s/he identifies as relevant to know; leaning how to learn becomes more important than factual knowledge; feelings are as important as facts. (Gage, Berliner, 1975)

It is through this "immediate reality," or lived experience that questions are raised and ideas are generated, and it is through lived experience that ideas become meaningful.

> Experiential learning involves becoming aware of the quality patterns and consequences of one's own experience as one experiences it. (Torbert, 1972)

2.5.1.1 ACTION

"Much significant learning is acquired through doing" (Rogers, 1967).

> But to an adult, his experience is him. He defines who he is, establishes self-identity, in terms of his accumulation of a unique set of experiences. So if you ask an adult who he is, he is likely to identify himself in terms of what his occupation is, where he has worked, where his has traveled, what his training & experience have equipped him to do, & what his achievements have been. An adult is what he has done. (Rogers, 1967)

Elaborating (Knowles, 1976):

> every person moves on a scale from zero to infinity in each demension throughout his life, & tends to incorporate learnings from a given experience in proportion to their relavence to his stage of development on a scale on the scale at that moment. For example, in a group of fifteen adult students, the individuals would be ready to take fifteen different degrees of responsibility for their own learning; & if the learning experience is to be maximally useful, provision must be made for this range of differences.

Concurring (Rogers,1969):

> a new kind of emergent universality of value directions becomes possible when individuals move in the direction of pyschological maturity, or more accurately, move in the direction of becoming open to their experiencing. Such a value base appears to make for the enhancement of self & others, a& to promote a positive evolutionary process.

While seeming to reject experience as being merely something "happens to you muscles"; adult learning is what "will be via the route of situations not subjects." (Lindeman, 1975)

> The situation-approach to education means that the learning process is at the outset given a setting reality. Intelligence performs its functions in relation to actualities, not abstractions. The resource of highest value in adult education is the learner's experience. If education is life, then life is also education. Experience is the adult learner's living textbook.

To imposition from above is opposed expression and cultivation of individuality; to external discipline is opposed free activity; to learning from texts and teacher, learning through experience; to acquisition of isolated skills and techniques by drill, is opposed acquisition of them as means of attaining ends which make direct vital appeal; to preparation for a more or less remote future is opposed making the most of the opportunities of present life; to static aims and materials is opposed acquaintance with a changing world. (Dewey, 1938)

Progressive education is organized around several key concepts. The central one is experience, while others are democracy, continuity, and interaction.

The will to learn is an intrinsic motive, one that finds both its source and its reward in its own exercise. The will to learn becomes a "problem" only under specialized circumstances like those of a school, where a curriculum is set, students confined, and a path fixed. The problems exist not so much in learning itself, but in the fact that what school imposes often fails to enlist the natural energies that sustain spontaneous learning -- curiousity, a desire for competence, aspiration to emulate a model, and a deep sensed commitment to the web of social reciprocity (human need to respond to others and to operate jointly with them toward an objective). (Bruner,)

2.5.1.2 REFLECTION

Reflection holds a critical place in the creative process. Although presented from a different point of view (Zahn 1966 cited by Shreenan, 1979) conveys a description of a learning experience not unlike that described elsewhere.

> It is essential to the planning of any group or individual learning enterprise to set aside adequate time for reflection & conceptualization. As often as not, insufficient time is allowed for this phase of the learning experience. (Johnson, Johnson,1975)

From a different frame of reference Harry Overstreet (cited in Knowles,1976) also speaks to the adult learner:

> A mature person is not one who has come to a certain level of achievement & stopped there. He is rather a maturing person -- one whose linages with life are constantly becoming stronger & richer because his attitudes are such as to encourage their growth ... A mature person, for example, is not one who knows a large number of facts. Rather, he is one whose mental habits are such that he grows in knowledge & the wise use of it.

The 'fully functioning person' is described (Rogers, 1969) as follows:

> There then is my theoretical model of the person who emerges from therapy or from the best of education, the individual who has experienced optimal physiological growth -- a person functioning freely in all the fullness of his organismic potentialities; a person who is dependable in being realistic, self-enhancing, socialized & appropriate in his behavior; a creative person, whose specific formings of behavior are not easily predictable; a person who is everchanging, ever developing, always discovering himself & the newness in himself in each succeding moment of time.

The prerequisite for this task was a form of education enabling the people to reflect on themselves, their responsibilities, and their role in the new cultural climate -- indeed to reflect on their very POWER of reflection. The resulting development of this power would mean capacity for choice. (Freire, 1973)

> ... two dimensions, reflection and action, in such radical interaction that if one is sacrificed -- even in part -- the other immediately suffers ... when a word is deprived of its dimension of action, reflection automatically suffers as well; and the word is changed into idle chatter, into VERBALISM ... On the other hand, if action is emphasized exclusively, to the detriment of reflection, the word is converted into ACTIVISM. The latter -- action for action's sake

> -- negates the true praxis and makes dialogue impossible.

Camus' definition (cited in Merzirow, 1979) of the intellectual as "a mind that watches itself," and goes on to say that this "describes an essential function of learning in adulthood."

What is called "reflective action" (Thelen,1960) where one "sees the immediate act as illustrative of human and social nature," and is then able to understand and develop principles.

> To enter the realm of learning from experience is to enter that part (that so much larger part) of the universe where we do not know what things mean to begin with. How could we ever enter there except through an attention that takes the initiative, ever and again, to journey beyond pre-constituted meaning? (Torbert, 1978)

Existence comes from the Latin ex-istere meaning to STAND OUT ... referring to the process of INVESTMENT or man investing personal meanings ... the transitive nature of the process. The human personality is invested beyond the mind into the social environment, so that man is conceived as a radiating center of meaning. (Hampden-Turner 1970)

The ACT of investing creative and moral choice into the environment is a crucial dimension of existence. While we begin to exist merely by perceiving and construing, we deepen our commitment and add significance to our being- in-the-world by the projection into social reality of our personal syntheses. (Hampden-Turner, 1970)

Self-disclosure is when a person expresses and questions his OWN experiencing, thus modeling effective exploratory patterns of behavior. If a judgment or evaluation is made, it is expressed as part of one's experience, and as relating to the current situation rather than treated as the basis of all experience. (Torbert, 1972)

2.5.2 SYNERGY; DYNAMIC FUSION OF THE COGNITIVE AND AFFECTIVE DOMAINS

During the decade of the 1970's, as behavior modification and other performance related learning theories held sway, the countervailing position that focuses on thinking and feeling was forced to articulate its terms of reference and principles in more precise and meaningful ways. One of these descriptions of cognitive-affective learning was called "synergy". The word is derived from the synthesis level of learning in the cognitive domain, and energy or the will to act appropriately on the thought suggesting the characterization level of learning in the affective domain.

The theoretical premise of synergy is the recognition that learning necessarily takes place on both planes, and is manifested in a limited way through behavioral change. To the synergists the primary arena of learning is within the subject, and is characterised by a bi-modal struggle, similar to propriorceptive oscillation, between opposite values. Learning then can be described as the four bi-modalities of "living inquiry", "dialogue", "interdependence" and "praxis".

Living inquiry is the clash between certainty and ambiguity where the former, if not challenged, leads to "zero learning", and the latter to an undifferentiated and novel experience. Each not at all useful until they are "synergized" for effective problem solving [learning].

Freedom and responsibility, systematic doubt and ensuing certainty, etc., develop together. Unless values are mutually enhancing NONE of them can really develop, hence you can choose your values, but synergistic relationship is an underlying condition for the realization of that choice. (Sanford and Hampton-Turner,)

The learners' need for and ability to tolerate both certainty and ambiguity in learning is an important element of trust; certainty represents "the psychological posture of ANSWER ... [and] the dimension of control," while ambiguity represents "the psychological posture of QUESTION ... [and] the dimension of creativity." (Ingalls, 1976) The synergy of certainty and ambiguity enables what Torbert (1978) calls "living inquiry," or:

> "... the art of continually exploring beyond pre-constituted universes and continually constituting and enacting universes in concert with others ... as yet a publicly undiscovered art."

Dialogue is the manipulation of open and closed feelings where the former, if left alone, leads to uncritical openess and the latter to distance alienation. Synergy causes the learner to oscillate between the two polls appropriately to the learning

> "...dialogue is the encounter in which the united reflection and action of the dialoguers are addressed to the world which is to be transformed and humanized, ... dialogue is an encounter among men who name the world, ... it is an act of creation" (Freire, 1968)

Interdependence is the competition between self and other where the former if not confronted leads to independent individualism and the latter to dependent socialism. The synergetic confrontation enhances the quality of the learning. The interdependent mode person (Nash,1973):

> "... favors the conditions that permit self-expression, not as an end in itself, but rather as a means of furthering dialogic values, the quality of human relationships, and creativity in community ... he wants to be effective WITH others and in order to become CLOSER to others, not in order to distance himself from others or to surpass them. His goal is to become more fully human."

Praxis is the fourth modality. [See above]

These four bi-modalities then are the elements of synergetic learning. The fusion of the cognitive and effective domains into a critical mass allowing for unique and significant learning to take place; a learning that can be manifested in a limited way through psycho-motor performance.

> The unique situation is discoverable only AFTER we have leapt the distance to the other, clashed in dialectic, and then engaged with him ... As the confrontation continues, contradiction gives way to what Buber has called "a unity of contraries" or SYNERGY .... It consists of an affective and intellectual synthesis which is MORE than the sum of its parts, so that each party to the interaction can win a "return on investment" that is greater than the competence risked. (Hampden-Turner, 1970)

Learning is purposeful. It is an attempt to protect self concept and maintain self-organization by minimizing dissonance:

1. A flexible curriculum, in the sense that the goals it presents must be appropriate to the personal value system, the self-concept, and the present understanding and skill of the student.
2. A classroom setting in which the student is free to explore and express his own perception of the

situation without fear of humiliation or reprisal.
3. It is essential that the curriculum and the school situation give the student the opportunity to test his perceptions of reality by acting on them.
4. In learning, the important evaluation is the one made by the learner. To make this evaluation as realistic as possible, and in a social situation where he feels respected and valued so that he will feel less need to protect himself from rationalization and excuses. (Snygg, 1966)

A deepened consciousness of their situation leads wo/men to apprehend that situation as an historical reality susceptible of transformation. Resignation gives way to the drive for transformation and inquiry, over which men feel themselves to be in control.

The existential knower cannot by definition practice the traditional scientific detachment. He is studying relational facts, and the attempt to detach himself could destroy these. Even where he is observing the mutuality of others, the source of his concern, since his own feelings and powers of identification are important clues to the shared human condition. (Hampden-Turner, 1970)

No one can supply another person with self-recognition. Each must appropriate his self at his own initiative. One's self is the fount of one's initiative. Learning through self- recognition is indissolubly tied to the development of realization of the organizing motivation of one's self centered internal motivation ... learning through self- recognition is the kind of learning necessary for a non-conscious person to become conscious. And this is not merely one among many kinds of learning, for consciousness is a condition for all genuine learning. (Torbert, 1972)

2.5.3 PERSONAL LEARNING MODELS

1. NON-DIRECTIVE TEACHING (Rogers) building the capacity for personal development in terms of self-awareness, understanding, autonomy, & self-concept.
2. AWARENESS TRAINING (Perls, Schutz) increasing one's own capacity for self-exploration & self-awareness. Emphasis on interpersonal understanding, & body-sensory awareness.
3. SYNECTICS (Gordon) development of personal creativity & problem-solving.
4. CONCEPTUAL SYSTEMS (Hunt) incresase personal complexity & flexibility.
5. SOCIAL PROBLEM-SOLVING (Glasser) development of self-understanding & responsibility to oneself & one's

social group.

2.6 ISSUES

Following from the individual/social learning dichotomy are two issues that have as yet to be resolved: the nature of learning & the locus of control. Again, the views taken are predicated on what side of the dichotomy the particular thinker finds him/herself.

2.6.1 NATURE OF LEARNING

The issue of what learning is polarizes thinkers as well. While learning is amply discussed in a preceeding section, it requires brief examination here in the context of different positions people take on this question.

Behaviorists take their name from their view that learning is observable and quantifiable. This position minimizes the importance of both thinking and feeling, and points to the doing. The former two are considered aspects in the process that results in being able to do something.

Learning is a process which takes place within the organism and is inferred from specified changes taking place in the organism's behavior. Such changes in behavior

1. are directed toward certain standards or criteria which have been established and
2. can be related to the necessity of practice or experience in order to achieve such standards (Hall,).

Another position on this question of the nature of learning has been long advocated by Gestalt psychologists. Their studies suggest that learning is multifaceted and takes place in three dimensions -- thinking, feeling and acting. This approach views learning as experiential with the person responding to vectors in a force field.

One variation on this view is that the human does not have conscious existence until he/she begins responding to an environment. Existentialists, as they are called, emphasize the importance of life's experiences. The dichotomy of Behaviorism and Phenomenology is particularly interesting to students of adult education because of its far reaching implications both to instructional methodologies and human learning protocols. It is useful to examine adult education professional practice in the light of what we know of human learning and the various methodologies we use to achieve certain specified learner outcomes. A professional ethic is clearly at stake for what we state we do to people is couched in a vocabulary and protocols that are not necessarily congruent with what we are actually doing. For example, humanistic oriented adult educators generally prefer to be called "facilitators" or "workers" (community, group) or "coordinators" and resist labels such as "teachers" or "instructors" or "managers" or "leaders" or "directors". Again, the humanist adult educators prefer to consider the "freedom of choice", the "inner direction", the "self actualization" of the learner and reject vocabulary that suggests that there is no freedom.

Adult educators who make even a cursory examination of the conditions requisite for learning readily identify the several stimuli working in the learner's environment, as well as the schedules of positive and negative reinforcement that are at play. We know for example, that the cognitive and affective domain operate in concert rather separately, we also know that "getting the learner to come up with the solution to his/her problem" is an effective protocol to institute. What we are reticent to acknowledge is that we, the adult educator, have carefully manipulated the phenomena that the human acts upon, and then we have orchestrated the reinforcers (which is merely the changing of environmental phenomena to create within the process either circumstantial anxiety or confidence) in ways that will cause the human to learn. Essential to successful understanding of phenomena, or of stimuli and reinforcers, is the recognition that the vocabulary and behaviors that have been conditioned to accept are necessarily directing their learning.

Learning is the rearrangement of responses within a habit-family hierarchy (Hull,).

Why is it so important to discuss the wide spectrum of human behavior? Because interpretation thereof is colored by the vocabulary we use, and because we have long been taught that man can and must (is responsible) intervene in this historical process of humankind in some "free to make choices in each situation" manner and thereby correct apparently unjust circumstances. True, we have been conditioned to "think" that this is possible, and our behaviors manifest protocols which are expressions of such a belief, but in actual fact these are merely appropriate and tentative responses to the momentary circumstances existing in the geo-economic environment. Questions of ethics, of right and of individuals are responsive both to the environment and to the chemo-electrical neuron structure of the body.

It is an inside-outside balance that the organism seeks to maintain within its environment. The leader is in a rather unique position in that he/she has been attributed a role of anticipating the manner that the collectivity will respond to its environment.

The classical teacher follows with the task of effecting the behavioral changes necessary to accomodate the new stimuli.

The "adult educator" is responsible for both. He/she is involved in the training of leaders, as well as the training of followers, who anticipate/ adapt to the current needs of the system.

As becomes readily apparent the emphasis a program planner gives to one or another aspect of the plan is the result of his/her view on these issues. Similarly, the manner in which the learner responds to the plan is also the result of the degree of identification with these issues.

An attempt to bring together behaviorism and humanism is found in this definition: it is the synthesis of behavioral techniques with humanist goals. Contemporary humanism especially humanist psychology, offers directions for the kind of behavior that individuals should be able to engage in; contemporary behaviorism offers principles and procedures to help individuals increase their humanistic actions. (Thornsen, 1979).

2.6.2 INNER/OTHER DIRECTION

There are five learning issues that influence the adult educator's program planning. One issue is the degree of "inner/other" directed the educator espouses. The second is where the locus of learning primarily lies; is it necessarily observable behavior, or is it information processing, or is it some combination of cognitive affective and psychomotor learning?

The advocates of self-directed learning assume that humans have the capability and the need to direct their own learning. Satisfaction in learning becomes its own motivator (reinforcer) towards further learning. Success is ultimately valid only if perceived to be by the learner. This position is often held by humanist educators.

Advocates of other directed learning emphasize the importance of such conditions as appropriate environment, objectives, reinforcers, and various forms of evaluation as techniques through which to cause learning to take place in another person. Behaviorist educators, as they are called, generally assume that something or someone other than the learner is actually in control of the learning process. They emphasize that it is better for a responsible individual to be in control rather than it be left to chance.

Learners, irrespective of age, require assistance in organizing objectives, designing learning experiences & providing a framework to facilitate action. (Gagne', 1965; Bandura, 1969; Skinner, Gage/Berliner, 1975; Howe, 1977) Some adults "tend to appear to be interested in the learning of subject-centred materials via the most economic & concise delivery system ... [and] would apparently respond to the careful preparation by a teacher of a coherent lesson plan which exhibits characteristics of closure & is unambiguous." (Brochard, 1976)

2.6.3 SELF-DIRECTED LEARNING

The movement from dependence to autonomy or self-directedness is a measure of adult maturation. Each experience in life contributes to one's sense of dependence or independence [autonomy, self-direction] (Maslow, ; Piaget, ; Erickson, ; Buhler, ; Havighurst).

Learning is, however & for the most part, an individually initiated activity (Broschard, 1977).

When young learners participate responsibly in planning the learning process they develop self-reliance, self-confidence and self-esteem, thereby, by leaving formal schooling better equipped for lifelong, continued learning. (Wright, 1970)

The positive effects of self-worth and personal development are [often] the result of personalized education. (Franseth, 197) Where there is choice in the learning self-confidence, the acceptance of responsibility and the development of independence apparent in the learner. (Howe, 1975)

People will exercise self-control and self-direction if the are committed to the organization's objectives; people will accept and seek responsibility under proper conditions. However, not a people are able to assume responsibility because their experience have inhibited their natural instinct towards self-actualization (McGregor, 1966)

Adult learning programs should respond to an individual's need for self-determination. (Kazanas, 1973) "For the existentialist, the self is devoid of character or coloration before action is undertaken";

- Existence proceedes essence
- Man is free to choose and responsible for the consequences
- Man's life is never completely seperate from the existence of others
- Perception is more valid when it is freed from

subjective preconceptions (Green,1973).

On the other hand the humanist adult educator focuses the learner on self-determined goals, social development, communication skills, and sensitivity to beauty...an inter-relationship with environment, not merely adjustment. The learning person is in continual interaction and change towards greater self-actualization. This self-actualization is of the whole self -- emotional physical and intellectual -- as "The sum is worth more than the parts" (Maslow, 1954).

Individuals have a need to self-actualize, and are viewed as having a built in mechanism to foster their own development through experienc that self-fulfillment and understanding are the goals of learning; that each learner's human potential is explored with each experience (Belkin, 1977).

Self education is possible when an individual has sufficient insight to define objectives clearly, to select and arrange a sequence of developmental tasks for himself, and to manage and effectively decide his own progress with objectivity ...

> Such sophistication is not ordinarily characteristic of individual's need of learning; consequently, the educational setting constructed an external agent to make systematic achievement possible is still required in most cases in order for an individual to accomplish the needed learning. (Verner, 1964)

Clinically I find it to be true that though an individual may remain dependent because he has always been so, or may drift into dependence without realizing what he is doing, or may temporarily wish to be dependent because his situation appears desperate, I have yet to the individual who, when he examines his situation deeply, and feels he perceives it clearly, deliberately chooses dependence, deliberately chooses to have the integrated direction of himself undertaken by another. When all the elements are clearly perceived, the balance seems invariably direction of the painful but ultimately rewarding path of self- actualization and growth. (Rogers, 1951)

The person is ultimately responsible for the learning that takes place. In keeping with Existentialism, the whole person is:

1. continually interacting with the environment
2. always growing & changing
3. essentially free to choose & responsible for the consequences
4. seeking to self-actualize
5. basically good.

The human is devoid of character or coloration before action takes place (Green, 1973).

The learner is viewed as having a built in mechanism to foster her/his own development through experiences (Belkin, 1977).

Learners are more motivated, learn better and see their learning as more personally meaningful when they have more responsibility for planning, directing and evaluating their own learning. (Knowles,1975; Tough,1971)

Pleasure, joy, happiness, confidence, and self-esteem, will increase with the completion of a self-directed learning project, thus reinforcing possession and retention of certain knowledge and skill. (Tough,1973)

> ... people approach [independent] learning with an empty hungry mind, and what they get, they bite. But when they encounter the confusion and difficulty usually posed by the reality of independent study, they grow insecure, stop far short of alternative goals, abandon their efforts, or try to find some other way of learning. (Houle, 1976)

The self-directed personalized approach is expected to have the following effect on self confidence and self esteem:

> Much is ignored and some experiences are even rejected and distorted. Notice that what is rejected is what is inconsistent not just what is unflattering. The person whose self-concept is of failure and inadequacy cannot accept praise as being true and honest. He may need to be helped to a different picture of self before he is able to accept or assess either praise or blame. (Kidd, 1973)
>
> ... people tend to feel committed to a decision or activity in direct proportion to their participation in or influence on its planning and decision making. (Knowles, 1973)

Educational arrangements in which the student is entirely responsible for matching himself to an educational environment raise basic questions about the student needs and who is to define them. Whatever one's stance is on the issue, it seems clear that more attention should be paid to the question of how students can learn to make more appropriate choices. The issue is not so much whether a student at any age knows what is best for himself, but rather how can he become more self-responsible through experiencing the consequences of his actions without being overwhelmed by irreversible negative consequences. (Hunt, 1975) The process of self-directed learning is one in which:

> ... individuals take the initiative, with or without the help of others, in diagnosing their learning

> needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (Knowles,1975)

Goal-setting has been identified as a critical aspect of self-direction (Knowles,1975; Tough,1971; Winter, Griffith, Kolb, 1970; Schwitzgebel, Kolb, 1974). A useful distinction between learning through goal-setting-and-achievement and learning toward consciousness "in the mode of situational experimentation," or learning from experience, "... goal- setting-and-achievement becomes subordinate to learning ... rather than learning being a by-produce of goal-achievement." (Torbert,1972) The thread that runs through learning from experience is:

> ... a sense of the overall, lifetime, autonomous purpose and integrity of the system .... The "inner" conscious purpose can be contrasted to the "external" behavioral goal. Goals are subordinate to one's purpose. Goals are related to particular times and places, whereas purpose relates to one's life as a whole, one's life as act. Purpose has also been termed "intention".

This notion of "intention," which is related to but not equivalent to stated goals, is central to the capacity for self-directing one's learning. Increasing capacity for self-direction implies that the learner sees her/himself as the originator of his/her own actions, directions, purpose and meanings. The learner is not dependent on others nor does s/he ignore the existence of influence of others and the environment. S/he takes responsibility for her/his actions and their implications, while maintaining a conditional stance toward him/herself and his/her meaning perspectives. (Winter,1970;Griffith,1970;Kolb,1970)

Indeed it is incumbent on self-directed learners to organize their learning program so that the several essential elements requisite for efficient and effective learning are included. Therefore, it becomes incumbent upon such learners to carefully identify the skills and knowledge that are to be learned, as well as taking responsibility for the choices inherent in the learning process.

The andragogical theory of adult learning is based on at le four main assumptions that are different from those of pedagogy. They are:

1. changes in self-concept
2. role of experience
3. readiness to learn
4. orientation to learning. The theory suggests that as an individual matures, his need and capacity to be self-directing utilize his experience in learning, to identify

his own readiness learn, and to organize his learning around life problems, increasing steadily from infancy to pre-adolescence, and then increases rapidly during adolescence.

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The major contributors to this theory have been the humanist clinical psychologists. They are concerned with the study and development of fully functioning persons (Rogers) or self-actual persons (Maslow).

The conditions for behavioral self direction are:
1. the specifications (identification) of a behavior;
2. the identification of the antecedent cues and environmental consequences;
3. the alteration of these antecedents and/or consequences.

How does one use these in practice?
1. self monitoring;
2. altering the environment;
3. altering the consequences of behavior (Mahoney, 1979).

It is false to assume (Monette, 1979) that [non-directed] adult learning groups have the "resourcefulness, adequacy of vocabulary, & conceptual ability" to fulfill those tasks [as mentioned above]. Indeed the premise that there is direction in the learning enterprise might be questioned. Similarly, Monette rejects educator prescribed needs & objectives. In keeping with the proceedures set down by Friere & Dewey before him, he establishes the importance of the learners & the facilitator to enter together into a process of examining values underlying all assessed needs, in order to allow the learners to substantively change the established views & habitual behaviors that are enslaving or manipulating him.

Behavioral indicators of self- and other-directed learners are (as plotted on a 7 point scale):

X = self-directed
y = other-directed

SCALE:	3	4	5	6	
Reserved			X	Y	Outgoing
Less IQ				XY	More IQ
Affected by feeling		X	Y		Emotionally stable
Humble			Y	X	Assertive
Sober		Y	X		Happy-go-lucky
Expedient	X		Y		Concientious
Shy		Y	X		Venturesome
Tough-minded			Y	X	Tender-minded
Trusting		Y	X		Suspicious
Practical		Y	X		Imaginative
Forthright		XY			Shrewed
Placid			X	Y	Apprehensive
Conservative	Y		X		Experimenting
Group-dependent		Y		X	Self-sufficient
Casual	X	Y			Controlled
Relaxed			XY		Tense

(Josephs, 1975).

2.6.7 FREEDOM TO CHOOSE & VALUING THE CHOICE

The adult educator clearly focuses on the learner's need for "greater & greater freedom, as he matures, to decide for himself what he wants to learn and how & when he wants to learn it." (Faure, 1972).

Experience (broadly defined) is the only teacher and that motivation to enter into the experience as well as satisfaction from the experience are essential elements for adult learning. (Tyler,1931; Carter, 1976).

Adult education is an experience of maturing, voluntarily selected by people whose major occupation is no longer that of going to school or college, in which these individuals or groups plan meaningful tasks & apply sustained inquiry to them ..., the major portion of adult education in the nation is engaged in helping people meet their individual needs as they are interpreted by individuals themselves (Essert [cited in Smith, 1970]).

Adult learners are precisely those whose intellectual aspirations are least likely to be aroused by the rigid, uncompromising requirements of authoritative, conventionalized institutions of learning. (Lindeman, 1975).

Deschooling is an approach to non-formal education "where the learner will establish new relationships with his environment and choose what, from who and when he wants to learn" (Illich, 1971).

Adult's deliberate efforts at learning, changing, growing with most of their projects falling into the categories of "self planned" or "group learning" activities (Tough, 1979).

Adult education is necessarily a voluntary activity; it embraces a great variety of interests & activities, & therefore cannot be planned on any narrow or sectional basis. Nor can it be confined within the limits of official programs, for it must be related to the freely expressed demands of those who are to participate in it. Not the least valuable part of it is its self-determining character, for the planning of educational activities by those who seek education is itself an exercise in democracy (Peers, 1972).

Learners need to "be liberated from oppresion of the traditional teacher by looking critically at their own social situation in order to take steps to change the society." Group learning fosters individual autonomy & freedom to transform reality. (Freire, 1972)

Adult education will become an agency of progress if its short-time goal of self-improvement can be made compatible with a long-time, experimental but resolute policy of changing the social orders. Changing individuals in continuous adjustment to changing social functions -- this is the bilateral though unified purpose of adult learning (Lindeman, 1975).

From a social psychological viewpoint human's "inner growth encourages exploring, experiencing, choosing, enjoying, transforming & doing. Positive action is thus an expression of positive perceptions & feelings" (Maslow, 1971).

We have seen that as years pass there are in adults' lives two contrasting needs: a positive force toward the achievement of positive goals, an expansion & a progressing of the individual; & a negative force, an increasing need to conserve & to protect against losses, often shown in a defensiveness that results in self-limitation & handicapping. The first of these, the positive need, is probably strongest up to middle age; the second, the negative need, becomes increasingly important with increased adult age (Kuhlan [cited in Knowles, 1976]).

The premise that education of the adult is the recognition of his individuality, & that education should be enabling, creating & mastering of an on-going process of self-differentiation (Kallen [cited in Smith, 1970]).

The underlying assumption in andragogy is that the adult learner has a deep psychological need not only to be self-directing but also to be perceived by others as being self-directing (Knowles, 1971).

Those individuals are free who know their power & capacities as well as their limitations; who seek a way of life which utilizes their total personalities; who aim to alter their conduct in relation to a changing environment in which these components of freedom are dependent upon a degree of intelligence & is realizable in terms of education. Both the amount of intelligence & learning essential for free self-expression varies with individuals. Freedom can never be absolute. None of us is self-determined. Self is relative to other selves & to the inclusive environment. We live in freedom when we are conscious of a degree of self-direction proportionate to our capacities. Then Lindeman warns: "No human being can safely be trusted with power until he has learned how to exercise power over himself."

A fundamental purpose of adult education is to facilitate growth of persons toward self-understanding & maturity. Only through an awareness of the complexity of human motivations, defining personal goals, methods of self-improvement, & knowledge of human development can the individual prepare for coping with the tensions of modern urban life. Self-knowledge is one of the fundamental aims of adult education. If the individual is not aware of his strengths & weaknesses, how can he grow ? Broady has stated that self-knowledge is especially needed because by the time of adulthood the individual has already committed himself to one pattern of value rather than another, or to patterns that may not be compatible with his own capacities or with each other. Self-knowledge he describes as an awareness of one's own skills, abilities, assets & liabilities (Axford,).

These numerous quotations focus on two major issues:

1. the importance of freedom of choice to individual adult learners; and
2. the need, by the learner, to preceive value in whatever learning enterprise s/he undertakes.

Indeed all the discussion concerning learning theories fades in importance, when compared with freedom to choose what, when, where & how to learn, & the equally important being able to value the why of the learning. Frequently, facilitators of learning become so focussed on the conditions for learning that they loose sight of the fundamental reason for the individual's participation; namely, the learning of something -- the knowledge, behavior, or attitude -- that is valued ! (Dewey; Argyris)

The creative process requires a period of inquiry. The inquiry is followed by efforts to solve problems raised by the inquiry. A period of withdrawal for purposes of reflecting upon proposed solutions is usually characterized by unexpected insights suggesting new solutions. The expansion of the insights, the product of the creative process, is usually implemented in a medium enabling it to be shared with other members of society. (Zahn,1966)

2.8 MOTIVATION/ACHIEVEMENT

[This detail correlates with Reinforcement detail in Social Learning] Suggested definitions of the term are:

1. Reward acts directly on neighboring connections to strengthen behavior; punishment has no corresponding directly weakening effect. (Thorndyke)

2. Because of the signalling function of conditions stimuli, it is presumed that some sort of drive - reduction is usually involved. (Pavlov)

3. [Drive] provides the basis for primary-secondary reinforcement. It activates habit strength into reaction potential. (Hull)

4. Motivation affects learning indirectly through what it causes the animal to do. Reward is a secondary or directive principal. (Guthrie)

5. Drive level (determined by degree of deprivation) affects the rate of responding. (Skinner)

6. Goals are present end situations, and as such modify learning through the principle of closure. (Gestalt)

The Glossary suggest two definitions:

-A specific hypothesized process that energizes differentially certain responses, thus making them dominant over other possible responses to the same situation; a specific hypothesized personal or organismic determiner of the direction and/or strength of action or line of action; there are different theories of motivation for each learning theory.

-A condition of the external or internal environment of an organism which increases the likelihood that the organism will emit a specific class of responses. (Tosti, 1979)

Synonym: DRIVE

2.8.1 ATKINSON THEORY

A learner's need for achievement depends upon 3 variables: his motivation to achieve, the expecting that by doing certain acts he will achieve, and the incentives available for achievement relative to the incentives for engaging in other competing activities.

1. Expectancy: cognitive anticipation, aroused by cues, that performance will be followed by some particular consequence.
2. Incentive: relative attractiveness of a specific goal or unattractive consequence.
3. Motive: a disposition to strive for certain kind of satisfaction, a capacity for satisfaction in the attainment of a certain class of incentives.

A person motivated to succeed will seek intermediate range success goals; person motivated to fail will seek high or low range success goals.

Success motivation is taught at early age.

After failure, success-oriented children will continue to be motivated to try again, while failure-oriented children will initiate avoidance strategies if task deemed easy and try again if task deemed extremely difficult. Thus: Tendancy to Achievement = Motivation X Expected Probability X Incentive or: T = M X P X I

2.8.2 MCCLELLAND THEORY

Protestant ideology based upon achievement, self-reliance & self denial - would teach high achievement motivation a la Max Weber (1904). In 1965 McClelland developed training programs in high achievement motivation in India.

1. Goal Setting
2. Language of Achievement
3. Cognitive Supports:
    - what kind of person is he
    - what is reasonable, logical & scientific,
    - what is important and valuable to his life.

2.8.3 CONCEPTS OF MOTIVATION

Cognitive
Hedonistic
Instinct
Drive-Homeostasis
Emotional

2.8.4 MOTIVES AND LEARNING BEHAVIOR

Intrinsic
Curiousity

Creativity
Sublination
Needs System
Achievement
Self Concept
Fear Anxiety
Anger
Identification
Affiliation
Extrinic
Rewards
Punishment
Social Motives

The experiencing of psychological success or failure is a major factor in determining one's self-esteem, involvement in learning, commitment to role performance, and level of aspiration (Lewin, 1944; Argyris, 1964).

Success is defined as:
1. the person is able to define his/her own goals
2. the goals are related to his/her central needs and value
3. the achievement of the goals represents a relatistic level of aspiration for the person (Lewin, 1944).

Whenever contact with subject matter is followed by positive consequences, the subject will tend to become a stimulus for approach responses. Conversely, whenever contact with subject matter is followed by aversive consequences, the subject matter may become a stimulus for avoidance responses.

Humiliation and embarassment, frustration, fear and anxiety are considered aversive, while increased self-esteem and self-direction are considered to be positive consequences. (Mager, 1968)

2.10 ELEMENTS OF LEARNING

There are certain principles of learning (Pine,Horn,n.d.):

1. Learning is an experience occuring inside the learner and is activated by the learner;
2. Learning is the discovery of personal meaning & relevance of an idea;
3. Learning (behavior change) is the consequence of experience;
4. Learning is a cooperative & collaborative process;
5. Learning is an evolutionary process;
6. Learning is sometimes an [emotionally] painful process;
7. One of the richest sources of learning is the learner himself;

8. The process of learning is emotional as well as intellectual;
9. The process of problem solving & learning are highly unique & individual.

Along the same lines (Rogers,1969) :
1. Human beings have a natural potentiality for learning.
2. Significant learning takes place when the subject matter is perceived by the [learner] as having relevance for his own purposes.
3. Learning which involves a change in self-organization -- in the perception of oneself -- is threatening & tends to be resisted.
4. Those learnings which are threatening to the self are more easily percived & assimilated when external threats are at a minimum.
5. When threat to the self is low, experience can be perceived in differentiated fashi on & learning can proceed.
6. Much significant learning is acquired through doing.
7. Learning is facilitated when the student participates responsibly in the learning process.
8. Self-initiated learning which involves the whole person of the learner -- feelings as well as intellect -- is the most lasting & pervasive.
9. Independence, creativity & self-reliance are all facilitated when self-criticism & self-evaluation are basic & evaluation by others is of secondary importance.
10. The most socially useful learning in the modern world is the learning of the process of learning, a continuing openness to experience & incorporation into oneself of the process of change.

These very meaningful principles bring together much of what has been discussed in learning. However, to make a summary examination of the various demensions of learning is difficult at best. So much has been written, and so much work is being done, that only a smattering of the information can be touched here Outside the realm of this presentation, for example, is the whole area of chemical & electronic interventions in human learning. Also learning theorists & practitioners have only recently recognized that human kind learn throughout their lives in dynamic & creative ways. As adult educators we have an opportunity to share, together with our coworkers, in this very exciting process.

These thinkers are all exploring vital aspects of human learning. Often their statements appear contradictory, but when subjected to a comparative analysis they appear to differ primarily in emphasis & actually fit neatly into a macro-learning model, which will be constructed someday. The concepts discussed cluster into ten elements, & are listed as follows:

1. The learner needs to be brought to a readiness to learn since s/he is usually detached from the given learning focus.
2. The observation of a specific reality or participation in a concrete action experience stimulates the learner to assess his or her congruence or dissonance in the event with valued concepts & attitudes or habitual behaviors.
3. Such an assessment motivates the learner to identify the discrepancy, by naming [codifying] the issue, conceptualizing the problem & objectifying a plan of action.
4. The learner structures a response through some analytical [step by step] inquiry [decodification, deduction] or reflection on the issue engaged, until reaching a state of saturation.
5. The learner's satisfaction, or dissatisfaction, with the inquiry provides the essential reinforcement [reward] necessary to shape subsequent steps in the process. This reinforcement can be either internally or externally generated; that is it can be derived from remmembering past similar experiences at learning & finding congruence, or it can be injected into the process by a co-actor [facilitator] in the learning.
6. The recurrent action or observation throughout the interactive process effectively places quantitative & qualitative parameters on the learning endeavor.
7. Ultimately, there is a synthesis [recodification, understanding, convergence or insight] from which the learner is able to respond with a new hypothesis for action.
8. Repeated utilization of the new learned response in an increasingly more generalized manner allows for greater transferability to other observations of reality or other active experiences.
9. The learning of new concepts, attitudes or behaviors place into disuse former learnings which are then extincted [forgotten] over time.
10. The learner's capacity to learn is constricted only by his/her willingness and/or the time available for learning.

3. SOCIAL LEARNING

3.1 INTRODUCTION

After exploring individual learning it is appropriate to examine learning in a social context. To begin with it is important to review two very important conditions that are found in almost all learning experiences. The first condition is the human skill of communication, where both knowledge & feeling are transmitted. The second condition is the skill of managing human interaction. By understanding these conditions the adult educator can then more readily approach the intricacies of social learning.

Communications is important to the adult educator. Without interpersonal communications skills the facilitator of the group learning process would not be able to function. A description of communications theory provides a framework for an examination of its interpersonal aspects. This is followed by an examination of the elements of social learning. Then there is an examination of the helping or facilitating process. The section ends with some reflections on the management of thinking & feeling.

The human species tends to group in order to meet its very basic needs. The (Maslow, 1954) hierarchy of "survival", "safety", "love", & "esteem" clearly suggest groupings, while "self-actualization" is itself a liberation from collective domination. This innate, or learned (depending on your theoretical position), behavior has ensured the survival of the species, by making rather frail creatures into powerful actors of the world stage. Donne's "no man is an island, no man stands alone" poetically describes the human's need to cooperate with others in order to achieve determined goals.

You are encouraged to become a participant-observer of this very exciting, & yet very basic, phenomenon of human behavior.

3.2 INTERPERSONAL COMMUNICATIONS

Interpersonal communications is the act of two or more persons seeking to transmit through sounds, signs & symbols a part of their knowledge or feeling to the others present, correspondingly to receive what has been transmitted by others. Interpersonal communication is interactive with the participants each giving & receiving information through the process. To a greater or lesser degree human communications makes use of all the senses, and a variety of fine & gross muscles. Consequently, it is a very complex process allowing for the communication of a multitude of messages -- simultaneously !

Various models have been suggested as describing the process of communications. Early theory (Berlo,1950) considered communications as a monodirectional process where there is

A SOURCE
A SENDER
A CODIFIER
A MESSAGE
A CHANNEL
A DECODIFIER
A RECEIVER

As an interpersonal communication took place the positions of sender & receiver would alternate. Subsequent communications models were attempts to improve upon this. It was called the "bullet" because it implied that the message went in one direction at a time.

Later theorists (Schramm, 1954) suggested that all parties in an interpersonal communication are transmitting messages simultaneous with their reception of messages. It was further (Shannon,Weaver) modified the model by emphasizing the sources of interference invariably found in the channel. This necessitated that the receiver sort out the salient message from the multitude of interfering signals emenating from the environment, and also from the sender. The model was complicated (Runkel,1971) further by introducing the dissonance theory, wherein the cognitive & affective fields, or "maps", of the sender & the receiver required a degree of congruence, in order for the information to flow from one to another. Then it was noted (Buchli,Pearce,1974) that the intended message & the perceived message were attitudinally-bound, and consequently seldom congruent.

Finally, the whoe question of a model was made (E Rogers,1975) untenable by insisting that in the act of communicating learning is taking place in both the sender & the receiver so that the intended message is necessarily different from the ultimate message and consequently the message cannot be described in static terms.

Thus a workable model of interpersonal communications becomes very complicated indeed. The original model adapted to take into consideration these other elements would look as follows:

SOURCE
Cognitive & Affective Maps
SENDER
Codifier
MESSAGE
CHANNEL
Signal Interference
RECEIVER
Decodifier
Dissonance
DESTINATION

To make the model complete the various elements are duplicated from sender "A" to receiver "B" as from sender "B" to receiver "A".

Model building is interesting to the theorist but as it becomes more elaborate, as this one has, it becomes less useful to the practioner. Of more importance to communicators are suggestions that will make the sender & the receiver more effective in their dialog.

Five components have been identified (Bienvenu,1974) for effective interpersonal communications. They are Self-Concept, Listening, Clarity of Expression, Coping with Feelings, & Self-Disclosure. He considers that individuals who are communicating will be more effective if they possess an appreciation of themselves, & consider that they have something of value to communicate. The second component is equally important in that listening to another's valued information is a part of interpersonal communication etiquette. Under listening there are certain rules (Bienvenu):

1. Have a reason for listening;
2. Suspend judgment initially;
3. Resist distractions;
4. Wait before responding;
5. Repeat verbatim to confirm comprehension of message;
6. Rephrase in sender's own words;
7. Seek important themes;
8. Reflect on what is being said & search for meaning;
9. Be ready to respond.

Speech is sent at about 100-150 words per minute while thoughts proceed at between 400 & 500 words per minute; he suggest that the differential time should be used to seek out the themes & reflect on what is being said. (Bienvenu,1974) And even more practical suggestions for effective listening (Bryson, Dean,1961) are:

1. Watch your body posture, inclining slightly forward is more effective than sitting slumped in the chair;

2. Maintain eye contact if possible, even if the sender casts his/her eyes down or away you keep looking at the face;
3. Appear relaxed & calm;
4. continually follow the senders message with both verbal & non-verbal following;
5. Don't digress, keep on the topic.

The third point (Bienvenu) that of clarity, is often assumed of literate people. However, the thoughts & feelings behind the words can be distorted by an inability to express their meaning. Considerable care must also be taken that ideas are adequately ordered; that digressions are minimal; that what is being said is being sent to the appropriate receiver (that the sender & the receiver are on the same "wave length").

There are certain verbal & non-verbal behaviors that enhance communication with a group.
1. Use simple, logical & clear expository language;
2. Speak at a normal rate without theatrical exaggerations & without excessive rigidity;
3. Check voice volumn with the size of the group & of the room;
4. Use a variety of voice tones, with emphasis on key ideas;
5. Speak at a rate that is compatible with your facility to pronounce the words & present the ideas;
6. Keep terminology to the group's level of comprehension;
7. Use synonyms when clarifying difficult words.

A communictions training program also identifies certain detractors, or interference, with the message. Stuttering suggests insecurity; "uh", "ah", "hmm", "eh" or the continuous repetitions of certain words suggests a lack of certainty; redundant words suggest a lack of planning; & academic, technical or "in house" jargon suggest affectation. Enthusiasm is the key ingredient to successful verbal communications.(Dobson,1975)

Also, the sender's presence is a particularly useful aspect of non-verbal communications. Presence is derived from thoroughly preparing the message; continually looking at the receiver with occasional glances at observers; avoiding distracting or fidgeting movements; & using gestures to emphasize points; & maintaining a self-assured poise.

A fourth component suggested (Bienvenu,1974) is that the communicator should:
1. Be aware of emotions;
2. Admit to emotions;

3. Own emotions (be responsible for what you do);
4. Investigate emotions;
5. Report emotional state;
6. Integrate emotions with intellect & will.

Bienvenu's final component, Self Disclosure, is an important strategy for building a trusting relationship. Often the sender will be unprepared to speak of his/her own feelings about thoughts under discussion until the receiver is able to enter that dimension of communication. Such a strategy should be used with care, as it elicits from the sender certain communications that the he or she might not wish to share, under other circumstances.

Another view (Craig, 1978) of communications is as the "self disclosure of inner energy and activity from within a person related to: the physical, the affective, the cognitive, and the spiritual."

There are several roadblocks (Bryson, Dean, 1971) called dissonance in the model, to communications. These include such things as receivers only hearing what they want to hear; receivers lack of knowledge or feeling about the message (cognitive or affective field incongruence); distortion of the message; word usage with different meaning to different people; an incompatible nervous or emotional state of either sender or receiver; & noise & interruptions causing interference with the message.

The sender is encouraged (Goffman,1966) to consider the variables that might influence the receiver:

> When individuals are in one another's immediate presence, a multitude of words, gestures, acts, etc. become available, through which one who is present can intentionally or not symbolize his character & attitudes. A certain ceremonial order is maintained within the communication using a certain etiquette system...

There are important outward signs (Frank,1966) to communications:

> Grooming & decorating may also serve as signs of rank, caste, prestige, authority, which others recognize & respond to with appropriate conduct....Indeed, these skin decorations & coverings are of large significance in the assumption & performance of the the various roles when not only the individual assuming a role must act in a prescribed manner, but others must respond appropriately if the role performance is to be completed.

In these quotes there is stressed the importance of knowing & understanding one's role in the act of communication. Communicators are cautioned, however, to consider the cultural variance which is hidden in all communications. (Hall,1966) "when different peoples use categories (of behavior) in intercultural communication they 'trip over invisible cultural ropes'." (Smith,1966) Non-verbal communications has three dimensions: physical contact, such as shaking, touching, holding, pushing etc; symbols, in dress and decor that indicate social, cultural & attitudinal values; & signs, the fine & gross motor behaviors that represent a smile, a frown, etc.(Fast,1970)

Group process & interpersonal communications are two areas of study well known to human development & social service workers. They have been presented here at the outset in order to emphasize their importance to learning. The keys to the successful facilitation of individuals' learning in a group setting are an understanding of, & an ability to relate to, the interpersonal dynamics & communications of a group. (NTL,n.d.).

3.3 GROUP LEARNING

[When reviewing this material, the reader is encouraged to integrate statements made here with the individual learning material on Enculturation & Phenomenology.]

Some contributors to the adult group learning theory are: Brunner, Kidd, Kempfer, McClusky, Verner, Houle, Tough, Booth, and Knowles.

Groups can be described as social & as functional systems where people work, live, play & have their being. (Melvin, 1979)

"A group venture extending beyond ... a single event and involving a systematic effort to inaugurate changes in thought, behavior & social relationships."(King, 1956)

The premise is that collective action is an efficient & effective way for individuals to solve problems within groups. (McMahon,1970) The individual, through concerted activity with other individuals, may be able to influence the events which shape his environment only through developing meaningful functioning organizations. (Ross,1955) "Organization ... is a method or process of effecting change." (Harper, Durham, 1959) It "is also a process through which problems are identified & solutions are developed." (Schaller, 1966)

Organizations are as "living systems" (organisms) that can be characterized by their aliveness and attention to the processes of growth. (Ingalls, 1979)

A group is defined as:

> ...an organization of social beings (or a body of social beings) as organized for the pursuit of some common interest or interests. It is a determined social unity built upon common purpose. Every end which men seek is more easily attained for all when all whom it concerns unite to seek it, when they cooperate in seeking it. Thus you may have an association corresponding to every possible interest of social beings. (MacIver, 1917 cited in Bramson, 1970)

3.3.1 DYNAMIC LEARNING FORCES

Two views on dynamics provide an analysis of group proceedures and interpersonal interaction. Groups are organized (White, Lippitt, 1960) to provide procedures for:

1. Participation
2. Coordination, linkage & conflict resolution
3. Planning
4. Internal & external diagnostic fact finding
5. Testing new patterns
6. Dissemination of new resources
7. Continuous education & reeducation

and they are one of the most effective institutional structures to meet the:

1. Accelerated change in the human condition
2. Explosion in expectations & demand for a better life
3. Pressure of a complex & "mass" society which threaten impotence & depersonalization
4. Need to clarify & actualize values
5. Trend toward human service economy rather than thing-production.

The human interaction found in a group has two major ingredients: group & process. The content is the learning or developmental outcome of the group, while the process is the dynamics or forces which determine the way the content outcome is achieved.

1. The level of the individual's participation is a valid indicator of group effectiveness.
2. Influence is another indicator of a group's dynamics; a group's development is often the result of felt, or observed, influences of individuals.
3. The decision making process of a group is essential to the achievement of the group's expected outcome; how decisions are made, and to what degree are they accepted by individuals is an important dynamic force in the group.

> 4. Helpful & harmful group behaviors, discussed elsewhere, can either move the group towards its goals or hinder its progress. Task behaviors focus on achievement of a particular outcome set by the group. Maintenance behaviors focus on the interpersonal relations of the participants.
> 5. Group atmosphere, or climate, is another important variable. Warm or cool, open or closed, fast or slow; all these are descriptors of the sense of friendliness & willingness of the participants to achieve the agreed upon task of the group.
> 6. Group membership is a prerequisite to effective participation; isolates or sub-groupings tend to sap the vitality of the collective force.
> 7. And corallary to atmosphere & membership are the participants' feelings; while seldom the major focus of a group's attention such attitudes as anger, frustration, affection, excitement & boredom directly affect the group's effectiveness.
> 8. Finally, acceptable & unacceptable behaviors of group participants are ultimately based upon standards set by the membership. (Saskatchewan New Start)

The effectively functioning group is one that practices shared leadership. (Hall, 1964)

> Our problem is different today. Rather than concentrating authority in individuals, it is to find the kind of atmosphere which will permit the widest distribution of individual authority. This is a major problem of democracy.

& further:

> There is more to government than the consent of the governed; it encompasses the involvement of the governed.

There are certain innate dynamic learning forces that exist within groups which can be tapped by willing participants (Olhsen, 1970):

> 1. Those who profit most from group [learning] recognize & accept the need for assistance & are committed to talk about their problems, to solve them, & to change their [learning] behavior when they enter the group.
> 2. Learners profit most from a group when they understand what is expected before they decide to join.
> 3. Increase responsibility for themselves & the [learning] process increases the [participants'] chances for growth within a counselling group.
> 4. Genuine acceptance by his fellow [learners] enhances self-esteem & encourages him to change his behavior.
> 5. [Cartwright (1968)] "The more attractive the group

> is to its members the greater is the influence that the group can exert on its members."
> 6. [Cartwright (1968)] "Both those who are to be changed & those who influence change must sense a strong feeling of belonging in the same group."
> 7. When learners come to feel reasonably secure within their group, they can be themselves, discuss the problems that bother them, accept others' frank reactions to them, & express their own genuine feelings towards others.
> 8. [Learners'] growth usually involves some tension.
> 9. When a [learner] understands & accepts the necessary conditions for a group, he is reluctant to ignore his group's norms, because he wants to be helped & he does not want to be perceived as a deviant within his group.
>
> The ...initiator function whould be gradually assumed by the group until there is no longer a leader. The group then becomes increasingly self-directing, determining its own goals, and directing its own activities to meet those self-determined goals. This type of discussion seems to be a good way to provide an uninitiated growth group with some means of orienting themselves before taking matters into their own hands. The greatest amount of power is released by a group that is left to itself. (Gordon cited in Osinski,n.d.)

3.3.2 INTERDEPENDENT LEARNING

Learners who choose to learn in the self-directed mode often experience a sense of isolation and are swept with a feeling of loneliness as they encounter seemingly insurmountable problems early on in their program of study. One reason for these feelings is the realization that the learner alone is responsible for the outcome of the experience. Another reason is that learners are accustomed to learning in groups in a dynamic interaction with some person with authority who not only disseminates information but also administers reinforcement. Such supports are not so clearly discernable to self-directed learners.

Social interaction amongst learners is an important force in cognitive development.

1. Learners attach special significance to activities valued by peers.
2. Learners serve as models to each other.
3. Cognitive explanations amongst peers often are more comprehensible.
4. Less advanced students may gain insight & correct inaccuracies in their thinking when discussed with

peers. (Webb,1980)

The effectiveness of group processes in facilitating learning has received empirical support. (Strauss, 1972) In addition to showing marked gains in personality skills & social interaction, learners improve significantly more in logical & abstract reasoning than those who have a limited group experience. (Tomlinson-Keasey, Eisert, 1978)

Expressions such as "genuine" (Colaizzi, 1978), "significant" (Taylor, 1979), and "deutero-learning" (Bateson, 1972), as well as "critical conciousness" (Freire, 1973; Torbert, 1978), and "perspective transformation" (Mezirow, 1979) suggest a learning dimension not generally attributable to the behavioral. These authors focus on the intangibles in human "psycho-social development" (Hampden-Turner, 1970).

The essential elements of interdependent learning are:

1. Self-direction - learners are more motivated, learn better and see their learning as more personally meaningful when they have more responsibility for planning, directing, and evaluating their own learning.

2. Self-reflection - learners look at their own patterns of behavior and responses, and are able to maintain an awareness of feelings and intentions, as well as conceptualize the experience.

3. Collaboration - learners work with others in relationships that respect autonomy and mutually enhance.

4. Trust - learners trust in the universe, in the nature of things, in others and in themselves -- on their abilities to make sense out of their experiences -- not as undifferentiated openness, but with a critical receptivity.

5. Openness - learners are receptive to others with a willingness to share experiences.

6. Risk-taking - learners respond to experiences in non-expected or habitual ways in order to seek out new and unexpected outcomes. (Joiner,1980)

3.3.2.1 COLLABORATION: BECOMING WITHIN A SOCIAL CONTEXT

In a sense learners both transform and are transformed by the social reality within which they live, work and learn.

> Men are fulfilled only to the extent that they create their world (which is a human world), and create it with their transforming labor. (Freire, 1968)

In learning, as in any other human experience, one is "only apparently alone." (Freire, 1973)

Inquiry is "a social development stimulated by the interaction of man with man" (Thelen, 1960).

> For apart from inquiry, apart from the praxis, men cannot be truly human. Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry men pursue in the world, with the world, and with each other. (Freire, 1968)

The essential characteristic of inquiry is open communication between persons, or dialogue.

> Dialogue is thus an existential necessity ... dialogue is the encounter in which the united reflection and action of the dialoguers are addressed to the world which is to be transformed and humanized ... It is an act of creation. (Freire, 1968)

> Some learners expect to get along with just printed materials. They may experience considerable difficulty and frustration before realizing their need for a human helper. (Tough, 1971)

This movement of inquiry must be directed towards humanization -- man's historical vocation. The pursuit of full humanity, however, cannot be carried out in isolation or individualism, but only in fellowship and solidarity; therefore it cannot unfold in the antagonistic relations between oppressors and oppressed. (Freire)

Graduate learners' descriptions of their experience revealted a 4-phase cycle. Beginning with a mediated involvement with others followed by a withdrawal; direct involvement in mutual inquiry; solitary, reflective activity; and, finally, a return to a mediated involvement with others at the completion of the inquiry. (Taylor,1979) Similarly, it is vital for the learner to develop the capacity for "alternate involvement with self and others -- not detachment."

3.3.2.2 TRUST

A capacity for trust is rooted in calls "a profound trust in the human organism and its potentialities." (Rogers,1969) It's not an abstract notion, but an intensely felt struggle by learners to believe in their capabilities and their potentialities -- to trust the wisdom of their own intuitions -- to rely on their own abilities to make sense of their experience.

After observing children's performance in the classroom, Holt (1964) commented:

> Intelligent children act as if they thought the universe made some sense .... It seems as if what we call intelligent children feel that the universe can be trusted even when it does not seem to make any sense, that even when you don't understand it you can be fairly sure that it is not going to play dirty tricks on you.

This trust in the universe and in others is not an undifferentiated openness, but a receptivity that is, at the same time, critical.

> Faith in man is an A PRIORI requirement for dialogue; the "dialogical man" believes in other men even before he meets them face to face. His faith, however, is not naive. The "dialogical man" is critical and knows that although it is within the power of men to create and transform, in a concrete situation of alienation men may be impaired in the use of that power. Far from destroying his faith in man, however, this possibility strikes him as a challenge to which he must respond. (Freire)

An active commitment to inquiry is based on an act of faith (as expressive of personal belief and value); neither the process nor the outcomes of the inquiry are inevitable. (Taylor, 1979)

3.3.2.3 RISK TAKING AND OPENNESS

> The risk a learner undertakes is permitting his/her structure to crumble with the knowledge that a new element ... may prevent the logical re-structuring of beloved ideas. One risk being ridiculed ... at a moment when ones competence is not firmly in ones grasp. By risking my undefended worth I am risking the verdict that I am worthless .... I do this because I am seeking confirmation ... and the expansion of my ideas -- YET I CANNOT GAIN THESE WITHOUT TEMPORARILY "SURRENDERING" AND RISKING PERMANENT LOSS. (Hampden-Turner)

What is proposed (Torbert, 1978) is a "living inquiry" in which we constantly take risks, or "'questionable' actions," rather than reduce risk through models of prediction and control.

Experientially an investment is the vehicle of inner conviction so that men feel COMPELLED to act on the basis of the moral synthesis they perceive. (Hampden-Turner)

> The paradox of acting from commitment while remaining open to the unexpected and to disconfirming feedback has been called "affirmation without dogmatism," (Hainer, 1968 in Argyris and Schon, 1974)

Along with its other connotations, the word "touchstone" suggests probing, testing, proving -- but in an existential sense; that is, as something we take back with us into the new situation that we meet. It helps us relate to that new situation, but the situation also modifies the touchstone. On us is laid the task, as long as we live, of going on probing, proving, testing, authenticating -- never resting content with any earlier formulation. However true our touchstone, it will cease to be true if we do not make it real again by testing it in each new situation. This testing is nothing more nor less than bringing our life-stance into the moment of present reality. (Friedman, 1974)

3.3.2.4 CONFRONTATION DIALECTIC

[Much more has been written from a Marxian view on the importance of confrontation; I just haven't recorded it yet.]

It is considered important to confront (Torbert, 1972) in the process of enabling

> ... the other person [to] break through behavior patterns and self-images in the mystery-mastery mode and to attain congruent transformations among his aims (whys), behaviors (hows), and statements (whats).

This support- confrontation dynamic must be carried out in the context of a caring, mutually enhancing relationship.

3.3.3 ENCULTURATION

Since knowledge "characterizes self in relation to the world" (Torbert, 1972), learning involves a transformation in one's view of self, as part of the world.

> The formation of the self, then, must also be understood in relation to both the ongoing organismic development and the social process in which the natural and the human environment are mediated through the significant others ... the self cannot be adequately understood apart from the particular social context in which ...[It was] shaped. (Berger and Luckmann, 1966)

A world view or perspective provides the basis from which one acts. A change in this perspective not only involves a change in how one views oneself, but also is likely to effect some change in how one acts, since "the form of action men adopt is to a large extent a function of how they perceive themselves in the world." (Freire, 1968)

As the learner is transformed through learning a new meaning perspective or world view, the world is also transformed.

> ... the relationship between knowledge and its social base is a dialectical one, that is, knowledge is a social product AND knowledge is a factor in social change. (Berger and Luckmann, 1967)

There will probably be no serious objection to the proposition that insight consists in a (rapid) reorganization of the field, since that may fairly be called self- evident. It is not at first glance so obvious that ALL learning consists in the reorganization of a field, since in many cases the process occurs very slowly. (Adams, 1931 in Colaizzi, 1978)

Reality is "socially defined" (Berger and Luckmann, 1966); that is, learning is experienced within a social context of meanings and relationships.

The symbolic universe is, of course, constructed by means of social objectivations. Capacity far exceeds the domain of social life, so that the individual may "locate" himself within it even in his most solitary experience. (Berger and Luckmann, 1966)

While enculturation has long been established in educational anthropology and developmental change in educational sociology both draw from field theory, systems analysis, organizational development, and ecological psychology.

> All education takes place in a social context "Yet research related to education has typically ignored the social factors that make education efficient or inefficient, although these factors may have such an extraordinary impact on the nature of education itself." (Travers, 1958)

One of the misconceptions in our cultural heritage is the notion that organizations exist purely to get things done. This is only one of their purposes; it is their work purpose. But every organization is also a social system that serves as an instrumentality for helping people meet human needs and achieve human goals. In fact, this is the primary purpose for which people take part in organizations -- to meet their needs and to achieve their goals -- and when an organization does not serve this purpose for them, they tend to withdraw from it. So organizations also have a human purpose. As if by some law of reciprocity, therefore, organization provides an environment for adult education. In the spirit of Marshall MuLuhan's THE MEDIUM IS THE MESSAGE, the quality of the learning that takes place in an organization is affected by the kind of organization it is. This is to say that an organization is not simply an instrumentality for providing organized learning activities to adults; it also provides an environment that either facilitates or inhibits learning.

No educational institution teaches just through its courses, workshops, and institutes; no corporation teaches just through its inservice education programs; and no voluntary organization teaches through its meetings and study groups. They all teach by everything they do, and often they teach opposite lessons in their organizational operation from what they teach in their educational program. (Knowles, 1973)

> ... the cultural assumptions governing the rules, roles, conventions and social expectations dictate that what we see, think, feel and act (Mezirow, 1979)

perceptions of that reality.

Culturally we advocate certain political, social, economic and psychological premises through the use of a descriptive vocabulary which causes us to "think" that what we SAY we are we really are. Philosophers (Descartes, etc.) have long known this. The macro geo-economic system has created cultural clusters that in turn create social communications networks which contain prescribed behaviors for stratified human beings. History is, without a doubt, a process of accomodation amongst collectivities as they respond to the emergent and circumstantial stimuli and reinforcers (both positive and negative).

3.3.3.1. A PROCESSUALLY ARTICULATED MODEL OF HUMAN LEARNING

- Loomis

1. Social Science: human activity analyzed by "action" frame of reference. Social action is the activity of social units.

2. Interaction: any event by which one party tangibly influences the OVERT actions or COVERT state of mind of the other. It is a reciprocal and interdependent activity.

3. Social Systems: orderly and systematic - patterned interactions of members. A means of delineating one system from another is by more frequent and intense occurance of specific types of interaction.

4. Conditions for Social Action:
    -Territorially
    -Size
    -Time

5. The Process: "The elements that stand in a given moment do not remain in relation for any length of time. Each process is characterized by a consistent quality of regular and uniform sequences and is distinguishable by virtue of its orderliness."

Cognitive mapping and validation
Tension Management
Communication of sentiment
Goal attaining activities
Concommitant "Patent" activity
Evaluation
Status role performance
Evaluation of actors
Allocation of status roles
Decision-making
Imitation of action
Application of sanctions
Utilization of facilities

6. Structural Functional

Categories	Elements
Knowing	Belief
Feeling	Sentiment
Achieving	End,
goal,objective	
Norming	Norm
Standardizing	
Patterning	
Dividing the functions	Status-role

Ranking	Rank
Controlling	Power
Santioning	Sanction
Facilitating	Facility

6.1 Knowing:

Belief (knowledge) as an element: A belief in any proportion about the universe which is thought to be true.
Cognitive mapping as a validation process may be defined as the activity by which knowledge (true or false) is developed.

6.2 Feeling:

Sentiment as an element: Whereas belief embody thoughts, SENTIMENTS embody feelings about the world.

Tension management is a process by which the elements of the social system are articulated in such a manner as to (1) prevent sentiments from ovstructing goal-directed activity and (2) avail the system of their motivating force in achieving goals.

Communication of sentiment is the process by which members of a social system may be motivated to achieve goals, to conform to norms, and to carry out systemic action than transfer of feeling by symbols.

6.3 Achieving:

End, goal or objective as an element: the CHANGE, or absence, that members of a social system expect to accomplish through appropriate interaction.

Goal attaining and concommitant "latent" activity as a process Although the GOAL is the objective in mind, many "side effects", also happen which are called LATENT.

Norming, Standardizing, Patterning:

Norm as an element. The reles which prescribe what is acceptable or unacceptable are the norms of the system.

Evaluation is the prcess through which positive and negative priorities or values are assigned to concepts, actors, or collectivities, or to events and activities either past, present, or future.

Dividing the Functions:

Status-role as a unit incorporating both element and process. Status emphasis position role implies function.

Ranking:

Ranking as an element. Represents the value an actor has for the system in which the rank is accorded.

Evaluation of actors and allocation of status roles.

Controlling:

Power as an element. Power is the capacity to control others. It has many components which may be classified as AUTHORITATIVE: is the right as determined by members of social systems and built with the status-role to control others or NON-AUTHORITATIVE: is unlegitimized coercion and voluntary influence. INFLUENCE may rest on personal characteristics, social capital, and many other bases.

Decision making and its initiation into action as a process. Decision making is a way to reduce alternatives available to members.

6.4 Sanctioning:

Sanction as an element may be a defined as the rewards and penalties used to attain conformity to ends and means. Application of sanctions as a process. After evaluation and decision making have assumed the sanction, amends are usually required in order that the sanction be lifted.

6.5 Facilitating:

Facility as an element. A facility is a means used within te system to attain the members' end.

Utilization of facilities as process.

7. Comprehensive or Master Processes:

Communication: is the proces by which information, decisions and directives pass through the system and by which knowledge is transmitted and sentiment is formed or modified.

Bondary maintenance: perserves the solidarity, identify, and interaction patter within the system.

Systemic linkage: is the process whereby the elements of at least two social systems come to be articulated so that in some ways and on some occasions they maty be viewed as a single (comples) system.

Institutionalization: through institutionalization human behavior is made predictable and patterned, social systems are given the elements of structure and the processes of function.

3.3.3.2 ATTRIBUTION THEORY

Learning theory which has typically viewed the learner as a "black box" is giving way to what has been termed by some as the "cognitive movement in insruction" (Wittrock, 1978). The expansion of theory and research in this direction is largely based upon a growing perception of the importance of various "internal" learner characteristics in producing differential performance. Learners' perceptions, attitudes, and values (as well as cognitive entry characteristics) affect performance and it is hypothesized that these account for differential results when instruction is relatively uniform.

In the area of motivation, the cognitive movement is also evidenced by a transition from the theory of motivation as a drive-reduction phenomenon to a number of motivational "mini-theories" (Bolles, 1978), which illustrate recent cognitive trends.

The following basic casual dimensions (Weiner,1979) have been identified:

1. locus - the degree to which the casual factor is perceived as being internal to the person;
2. control - the degree to which one perceives one's ability to control or change the factor; and
3. stability - the degree to which the factor is expected to remain stable over time.

There are myriad casual factors, some of which appear more prominently in performance settings. The factors contributing to success or failure in performance which are most commonly cited by research subjects and, thus, are most often used in attribution studies are ability, effort, task difficulty, and luck. Casual factors may also vary according to the culture and peculiar characteristics of the research subjects and the environment.

An attribution pattern is one's tendency, developed over time, to ascribe casuality to certain factors more often than to others across situations - in this case performance situations in an education or training setting. It is suggested that one's attribution patterns are directly related to one's achievement motivations (Bar-Tal, 1978; Weiner, 1979).

When this type of attribution pattern develops, it is a safe bet that either active or passive resistance and avoidance of performance-related activities will follow.

Research in casual attribution theory has reliably identified some tendencies toward different types of casual attributions associated with the following characteristics.

Gender - Females more than males, tend to attribute academic failure to internal and uncontrollable factors such as ability, while attributing academic success to external, uncontrollable factors such as fate, luck, or low task difficulty (Bar-Tal, 1978; Bar-Tal and Frieze, 1977; Feather, 1969; Simon and Feather, 1973). Males tend toward more ego enhancing and defensive casual attributions. They tend to internalize success, ascribing it to their efforts and abilities, and to view academic failure as the result of insufficient effort rather than low ability. The degree to which females might actually perceive achievement as due to their own efforts and yet choose to play a self-denigrating role is an unanswered research question. Attribution research indicates at least the tendency of females to report different types of attribution patterns.

Cultural/Ethnic Groups - There are some data to indicate that minority groups in the United States, as compared with non- minorities, attribute success and failure to such external uncontrollable causes as forces of fate and luck (Friend & Neale, 1972; Murray & Mednick, 1975; Eaton, Wahlberg Yeh, 1973). Another interpretation of these data is that some cultural minorities tend to perceive the co-variation of effort and result to a lesser degree than do non-minorities (Friend & Neale, 1972; Murray & Mednick, 1975). This tendancy should not be viewed deterministically, but can be put into a more realistic and useful perspective if interpreted within the cultural context.

Achievement Motivation and Academic Self-Concept - Learners high in achievement motivation and academic self-concept also tend toward certain patterns of attribution. Learners who have high motivation to achieve academically tend to ascribe success to ability and effort, while more often attributing academic failure to insufficient effort. People with high motivation to achieve academically seldom attribute failure to low ability (Bar-Tal, 1979; Bar-Tal Frieze, 1977; Kukla, 1972; Weiner & Kukla, 1970). Simply stated, a person whose causal attribution patterns are associated with high achievement motivation takes credit for a successful performance and, when unsucessful, does not engage in self-flagellation, but resolves to try harder in the future. One can easily see the difference between a person of this type and one who attributes all unsatisfactory performance to low ability.

Symbolic-interaction [attribution] theory is based upon the evidence that positive and negative self-concept corralates significantly with the expectations of significant others. While the evidence further points to lower than average academic performance linked to a negative

3. LABORATORY METHOD (NTL) development of interpersonal & group skills &, through this, personal awareness & flexibility.
4. JURISPRUDENTIAL (Oliver, Shaver) develoopment of the jurisprudential frame of reference as a way of thinking about & resolving social issues.
5. ROLE PLAYING (Shaftel, Shaftel) induces inquiry into personal & social values, with their own behavior & values becoming the source of their inquiry.
6. SOCIAL SIMULATION (Boocock) experience various processes & realities & to examine their own reactions to them.

3.4 FACILITATION

3.4.1 INTRODUCTION

The major points to be discussed in any summary of facilitation necessarily include what is considered to be the role of the facilitator as a helper in the learning process. Then consideration is given to certain of the tasks and skills required of an effective facilitator of adult learning. The reader will probably make comparisons in their mind with the role of teachers in their past. Each has an important role in the educative process but their roles are clearly distinct.

The purpose of facilitation is to support the learning enterprise of an individual or a collectivity as he/they proceed through a process. A fundamental pupose of adult education is to facilitate growth of persons toward self-understanding & maturity (Axford, 1969).

3.4.2 DEFINITION

To make easier or less difficult; help forward (an action, or process,etc.); to assist the progress of (a person). To facilitate a group's development is not the same thing as teaching.

3.4.3 FACILITATOR ROLE

Often teachers, trainers, facilitators & animators are considered as interchangeable designations of the learning group's leader. While they all have valued roles to play there are degrees of difference in their functions. That difference is usually attributable to the amount of authority that is ascribed to their leadership role. From the one extreme, of being able to detemine whether learning took place, to the other of not having any say in such determinations, stand the non-formal educators -- trainers & facilitators -- who seek the best of both. A facilitator seeks to ensure that a direction is clearly established by the learners, that goals (or learning outcomes) are identified when it becomes appropriate; that a plan of action is prepared, implemented, & evaluated; and on the basis of the evaluation that adaptations to the plan are implemented in order that the learning takes place expeditiously & with learner-desired results.

Teaching, in my estimation, is a vastly over-rated function. Having made such a statement, I scurry

> to the dictionary to see if I really mean what I say. Teaching means "to instruct". Personally I am not much interested in instructing another in what he should know or think. "To impart knowledge or skill". My reaction is, why not be more efficient, using a book or programmed learning? "To make to know". Here my hackles rise. I have wish to make anyone know something. "To show, guide, direct". As I see it, too many people have been shown, guided, directed. So I come to the conclusion that I do mean what I said. Teaching is, for me, a relatively unimportant and vastly over-valued activity. (Rogers, 1951)

The critical element in performing the facilitative role is the personal relationship between the faciliatator and the learner, which in turn is dependent on the facilitator's possessing three attitudinal qualities:
1. realness, or genuineness;
2. nonpossessive caring, prizing, trust, and respect; and
3. empathic understanding and sensitive and accurate listening. Every effective learner helps members understand those forces within the group which contribute to & interfere with their achieving their goals. It is not sufficient if he alone understands these forces. He must be able to help members identify & use the group's resources, to recognize behavior that suggests difficulty, to diagnose the difficulty, & to enlist everyone's assistance in solving the group's problems. For this he needs a knowledge of group dynamics & the ability to help members apply its findings in self-study

From the client centered therapy approach student-centered reaching was conceptualized (Rogers) based on the following assumptions:

1. We cannot teach another person directly; we can only facilitate his learning.
2. A person learns significantly only those things which he perceives as being involved in the maintenance of, or enhancement of, the structure of self.
3. Experience which, if assimilated, would involve a change in the organization of self tends to be resisted through denial or distortion of symbolism.
4. The structure and organization of self appear to become more rigid under threat; to relax its boundaries when completely free from threat Experience which is perceived as inconsistent with the self can only be assimilated if the current organization of self is relaxed and expanded to include it.
5. The educational situation which most effectively promotes significant learning is one in which (a) threat to the self of the learner is reduced to a minimum, and (b) differentiated perception of the field.

> If in therapy it is possible to rely upon the capacity of a client to deal constructively with his life situation, and if the therapist's aim is best directed toward releasing that capacity, then why not apply this method to teaching ? If the creation of an atmosphere of acceptance, understanding & respect is the most effective basis for facilitating the learning called therapy, then might it not be the basis for the learning called education (Rogers, 1965) ?

Behavior is the observable manifestation of feelings, attitudes, intentions & ideas that result from human interaction with his environment. However, educators are cautioned not to ignore the forces of the environment: "to refuse to contol is to leave control not to the person (learner) himself but to other parts of the social & non-social environment" (Skinner, 1971).

The trainer's function is to keep the requirements the group needs to meet clearly in front of it; but he also safeguards the right & opportunity of each individual to experiment with new ways of cooperating to meet the requirements (Thelen,).

The trainer is a person with special responsibility for helping individual & group members learn from their experiences. The trainer's responsibility is to facilitate learning about better group behavior. He is basically a teacher -- but he usually deals more in the analysis of here & now behavior than do most teachers. He is not precisely a member of the group -- yet he must retain some membership in the group, or his efforts will be fruitless. He is certainly not a leader or a discussion chairman -- yet his acts do influence the group in moving toward share goals. Basically, the trainer guides & facilitates learning. When the training group gets bogged down or becomes apathetic, or is full of fight, the trainer's job is not necessarily to help the group "get out of the mess", but to help them learn from this mess. In brief, the trainer must act as a planner prior to a training activity, as a guide during the operation of the activity & as an evaluator during the planning of new activities (Miles,).

The facilitator stands apart from the teacher in that the learning goals are set by the learner, & the learning plan seeks to follow the learner's way of learning, & satisfactory completion of the task is ultimately ascertained by the learner (Pine, n.d.).

> It is my (Rogers, 1969) contention that tomorrow's educator ... must know, at the deepest personal level, the stance he takes in regard to life. Unless he has true convictions as to how his values

are arrived at, what sort of an individual he hopes will emerge from his educational organization, whether, he is manipulating human robots, or dealing with free individual persons, and what kind of a relationship he is striving to build with these persons, he will have failed not only his profession, but his culture.

When adult students are first exposed to a learning in which the are treated with respect, are involved in mutual inquiry with the [facilitator] are given responsibility for their own learning, the initial reaction is one of shock and disorganization (Knowles, 1976).

3.4.4 METHODOLOGY

3.4.4.1 THE HELPING PROCESS

A list of ten points which apply to the process of facilitation:

1. The facilitator has much to do with setting the initial mood or climate of the group or class experience.
2. The facilitator helps to elicit & clarify the purposes of the individuals in the class as well as the more general purposes of the group.
3. He endeavors to organize & make easily available the widest possible range of resources for learning.
4. He relies upon the desire of each student to implement those purposes which have meaning for him, as the motivational force behind significant learning.
5. He regards himself as a flexible resource to be utilized by the group.
6. In responding to expressions in the classroom group he accepts both the intellectual content & the emotional attitudes, endeavoring to give each aspect the approximate degree of emphasis which it has for the individual or the group.
7. As the acceptant classroom climate becomes established, the facilitator is able increasingly to become a participant learner, a member of the group, expressing his views as those of one individual only.
8. He takes the initiative in sharing himself with the group -- his feelings as well as his thoughts -- in ways which do not demand no impose but represent simply a personal sharing which students may take or leave.
9. Throughout the classroom experience, he remains alert to the expressions indicative of deep or strong feelings.
10. In his functioning as a facilitator of learning,

the leader endeavors to recognize & accept his own limitations (Roger, 1969).

In this process the [facilitator] finds a new function. He is no longer the oracle who speaks from the platform of authority, but rather the guide, the 'pointerout' who also participates in learning in proportion to the vitality relevancy of his facts & experiences. (Knowles, 1976)

The conditions which facilitate learning:

1. Learning is facilitated in an atmosphere which encourages people to be active;
2. Learning is facilitated in an atmosphere which promotes & facilitates (permits) the individual's discovery of the personal meaning of idea;
3. Learning is facilitated in an atmosphere which emphasizes the uniquely personal & subjective nature of learning;
4. Learning is facilitated in an atmosphere in which difference is good & desireable;
5. Learning is facilitated in an atmosphere which consistently recognizes peoples' right to make mistakes;
6. Learning is facilitated in an atmosphere which tolerates ambiguity;
7. Learning is facilitated in an atmosphere in which evaluation is a cooperative process with emphasis on self-evaluation;
8. Learning is facilitated in an atmosphere which encourages openness of self rather than concealment of self;
9. Learning is facilitated in an atmosphere in which people are encouraged to trust in themselves as well as in external sources;
10. Learning is facilitated in an atmosphere in which people feel they are respected;
11. Learning is facilitated in an atmosphere in which people feel they are accepted;
12. Learning is facilitated in an atmosphere which permits confrontation (Pine, n.d.).

In a learner-outcome-focussed instructional setting" the major role of the facilitator changes from that of a dispenser of information (as in teacher) to that of a manager of events & proceedures required to achieve desired objectives. Facilitation includes meeting the following needs on the part of the learner: motivation, attention, participation, feedback, & opportunities for application (Moore, n.d.). Facilitative behavior in a group learning process:

1. Initiating/contributing
2. Information giving/seeking

3. Opinion giving/seeking
4. Elaborating
5. Coordinating
6. Orienting
7. Evaluating
8. Moving/shaking
9. Recording (Bergevin,1963).

Small group communication techniques are important for group decision-making .problem-solving as well as techniques for interpersonal relations. The facilitator must possess the ability for rational processing of data & have the skills & knowledge to evoke the learners' to develop their learning in an orderly manner. However, the ethics of manipulation need to be addressed by the facilitator, since there is a need to attain a defined goal, & there is also the temptation to direct the process, rather than facilitate the learning. (Bergevin, 1963)

Any teaching-learning transaction can be organized into three decision making sets:

1. The pre-impact category is concerned with planning or preparation decisions.
2. The impact category is concerned with classroom action or performance.
3. The post-impact category is concerned with evaluation of the impact decisions.

Each has its own style of teaching:

- command
- task
- reciprocal. (Mosston, 1972)

The richer teacher is one with a larger repertoire of behavioral models. (Mosston, 1972)

A considerable array of teaching.models exist which are available for use in adult learning. Each is directly linked to the desired learner-outcome. The four families of models (Joyce, weil, 1972) include:

1. The social interaction model, emphasizing the relationships of the individual to society or to other persons.
2. The information processing models, developing inductive mental processes.
3. The personal models, enhancing self-perceptions.
4. The behavior modification & cybernetic models, sequencing learning tasks in order to change behavior by conscious manipultion of reinforcers.

Still another model rests on the key assumptions about the nature of teaching; these assumptions are:

1. There exists a wide variety of teaching methods
2. Teacher behavior relates closely to belief system.
3. Teacher's response to learning environment is related to

teacher behavior. (Williams, 1980)

3.4.4.2 MAINTENANCE AND TASK BEHAVIORS

Facilitator behaviors can be divided into Maintenance & Task Behaviors.

Maintenance

Encouraging, gatekeeping, standard setting, following, expressing group feeling/thought, harmonizing, tension relieving, concensus taking, & evaluating.

Task

Activity initiating, information & opinion seeking, information & opinion giving, elaborating, coordinating, summarizing, testing feasibility of action, evaluating, & diagnosing. (Bradford, 1961)

The elements of communication can be combined with facilitation in the helping process approach to human development. The facilitator needs to become proficient in three basic helping skills: attending, responding, & initiating.

1. To attend the learner the facilitator should be able to physically & psychologically reach out & connect. The facilitator should be able to listen.
2. To respond the facilitator should respond to behavior, to feeling & to presentation.
3. Finally, the facilitator should be able to initiate learning proceedures in either the affective or [the psychomotor] or cognitive domains.

Carkhuff (1973) describes initiating behavior as:

1. Additive empathy;
2. Laying a basis of understanding of feeling & meaning;
3. Increasing accuracy;
4. Extending the base;
5. Developing the whole picture;
6. Personaliz[ing] the meaning, the problem, the feeling, & the goal;
7. Initiating confrontation;
8. Clarifying contradictions.

3.4.4.3 FACILITATING COGNITIVE LEARNING

A summary of techniques:

1. Consider the stage characteristics of the learner's thought processes in planning learning activities.
2. Use a wide variety of experiences rather than drill on specific tasks to maximize cognitive development.
3. Don't assume that reaching adulthood guarantees the ability to perform formal [abstract] operations.
4. Remember tht at each person structures each lerning situation in terms of his own schema.
5. Individualize leanering experiences so that each learner is working at an appropriate level
6. Provide experience necessary for the development of concepts prior to the use of these concepts in language.
7. Consider learning an active restructuring of thought rather than an increase in content.
8. Make full use of wrong answers by helping the learner analyze his thinking.
9. Evaluate each learner in terms of improving his performance.
10. Avoid overuse of materials that are so highly structured that they inhibit creative thinking.
11. Use social interaction in learning experiences to promote increases in both interest & comprehension.
12. An educators role can be summed: "What is desired is that the teacher cease being a lecturer satisfied with transmitting ready-made solutions; his role should rather be that of a mentor stimulating initiative & research." (Piaget cited in Good, 1979)

> The guidance [facilitation] of learning can often make the greatest difference between learning that is facile & learning that is hard; & also between learning that is relatively effective & learning that is ineffective. It is a significant fact, however, that learning guidance cannot usually be adequately planned without taking full account of the preparation of the learner. The kinds of processing that are suggested or directly communicated in the learning guidance event typically depend for their execution on the recall of prior learning.

There are five basic learning outcomes:

1. intellectual skills - learning the rules & concepts,
2. information - processing,
3. cognitive strategies - mental processes of thinking,
4. attitude - awareness training,
5. psychomotor skills - tasks, skills, rudiments. (Gagne', 1980)

3.4.4.4 GENERIC TEACHING COMPETENCIES

An effective teacher is one who:

1. is fully prepared in his/her subject
2. has a broad general education
3. understands the role of the school in our society
4. holds an adequate concept of self
5. understands the basic principles of learning
6. demonstrates effective techniques of instruction
7. efficiently handles management of the learning environment
8. possesses personal characteristics conducive to success in a classroom (Oliva, 1972)

The effective teacher is one who:

1. is interested in students as individuals
2. has patience & is willing to repeat
3. displays fairness
4. explains things thoroughly
5. is humorous
6. is open-minded
7. is informal, does not feel superior
8. knows the subject
9. is interested in the subject
10 is neat (Henson, 1974)

The skills that are generic to teachers at all levels include:

1. stimulus variation
2. set induction
3. closure
4. silence & non-verbal cues
5. reinforcement of student participation
6. fluency in asking questions
7. probing questions
8. higher order questions
9. divergent questions
10. recognizing attending behavior
11. illustrating & using examples
12. lecturing
13. planned repetition
14. completeness of communication

(Allen, Ryan, 1969)

Chief features of the competency-based approach to teaching are:

1. The specification of competencies which are observable & measurable.
2. Self-pacing.
3. Criterion-referenced measurement.
4. Field based experiences.
5. Mediated instruction. (Oliva, Henson, 1980)

The state of Florida has been a leader in competency based teaching, & has identified 23 generic teaching competencies which can be grouped into five categories:

COMMUNICATION SKILLS

1. orally communicate in a coherent & logical manner
2. write logically with appropriate grammar & sentence structure
3. comprehend & interpret message after listening
4. comprehend & interpret message after reading

BASIC KNOWLEDGE

5. able to function in the content area
6. aware of the patterns of physical & social development of students

TECHNICAL SKILLS

7. diagnose entry knowledge &/or skill of student
8. identify long-range goals in given subject area
9. construct & sequence related short term objectives
10. select, adapt, develop instructional materials meeting learning objectives & learner needs
11. select, develop, sequence learning activities appropriate to objectives & needs
12. use visual &/or verbal motivational devices
13. present directions for carrying out learning activities
14. construct or assemble testing instruments to measure performance

ADMINISTRATIVE SKILLS

15. manage classroom routines & procedures for utilization of materials & physical movement
16. formulate standard of learner behavior
17. identify & correct learner deviant behavior
18. develop a record keeping system of individual learner progress

INTERPERSONAL SKILLS

19. counsel both individually & collectively concerning learning needs
20 identify, demonstrate behavior reflecting a feeling for the dignity, worth of ethnic, cultural, linguistic & economic sub-groups
21. assist learners develop a positive self- concept
22. assist students in interacting constructively with peers

23. assist students in developing their own values, attitudes, & beliefs. (Oliva, Henson, 1980)

3.4.4.5 GIVING AND RECEIVING FEEDBACK

One of the accepted premises of group process is that all the participants, including the facilitator, are in the learning experience together. Thus the leadership role is likely to circulate from learner to learner, & not necessarily stay always in the hands of the facilitator. Often this becomes a very threatening situation for a facilitator as he/she then is expected to receive the same kind of facilitative support as was being given to the others in the group. Some rules for Giving & Receiving Feedback

Giving

1. Be honest;
2. Be helpful;
3. Focus on changeable behavior;
4. Be positive;
5. Suggest improvement.

Receiving

1. Be accepting;
2. Show appreciation;
3. Clarify;
4. If it hurts express it;
5. Be willing to try.

3.4.4.6 RECIPROCAL & EQUIVALENT TALK CATEGORIES

The facilitator's techniques can also be described as reciprocal categories & as equivalent talk categories.

Reciprocal

warms
accepts
amplifies
elicits
responds

initiates
directs
corrects
cools
silence or confusion

Equivelant

presents information
questions: restricts or expands thinking
responds
reacts: maintain level of participation

extends level of participation
terminates participation
structures learning activity
pause - silence. (Ober, 1971)

Facilitation of group learning is both satisfying & sobering. Satisfying because you, the facilitator, are a witness to one of the most exciting of human endeavors, that of learning; at the same time as facilitator you are sobered in the realization that you have accepted the responsibility to serve in a leadership capacity within the group, & the group members are depending upon you to facilitate their achievement of their goals.

3.5 FACILITATOR FUNCTIONS

by (MacDonald, 1979)

1. evokes opinions from participants in a non-coercive manner

2. inspires self-confidence in participants

3. focuses participants' energies on a direction agreed to by group in a manner allowing for eruption of pertinent but unforeseen directions

4. assists participants to express and deal with conflict within the group as a necessary part of the struggle of human beings to benefit from interpersonal experiences

5. evidences by choice of language, tone of voice, physical appearance a respect for the dignity of each participant

6. coordinates group energies in a non-manipulative manner

7. is supportive of change rather than innovative of change.

by (Shreenan, 1979)

Module Introduction

Clarifies Objectives

Uses Meaningful Examples to Reinforce a Point

Defines New Terms

Language Used is Easily Understood

Timing is in Keeping with the Pace of the Group

Facilitates Participation of Resource People in the Group

Works Out Action Plan

Reviews Previous Implementation of Action Plan

Selects and Conducts Structured Exercises in Group Setting

Relates What's Happening in the Group to the Objectives

1. Developing Group Norms

-people are important: communicate respect, listen, etc.

-encourage "testing out atmosphere" for people to try new behaviors
-recognizing expression of feelings as they relate to the process
-responding objectively to feelings - feelings are facts that comment on the process and can be learned from
-encouraging learning by doing and analyzing what was done
-keeping to the here and now
-encouraging cooperative planning of what the group will do

2. Providing Methodological Help

The facilitator should have the ability to recognize when a facilitative device (exercises, VTR, etc.) should be introduced to enhance learning. The Trainer should also be continuously increasing his scope of methodological ideas from which (s)he can select the most appropriate for a general situation.

3. Guiding Analysis

The facilitator brings into focus what the group has been experiencing. This may be achieved by interpreting what is happening in the group. Inquire about what is happening, generalizes to relate to immediate learning needs.

Task Functions

-gives information
-gives opinion
-seeks information
-seeks opinion
initiator
-summarizes
-coordinates
-takes group reading
-energizer
-reality tester
-evaluator

4. Supportive Behavior

The facilitator should practice supportive behavior in a group as the participants work, learn and engage in risk taking. The necessity for the facilitator alone to provide support should begin to diminish as the group strengthens and grows as a group. The facilitator should be aware of the emerging support system and regulate his behavior accordingly. The facilitator must also beware of overemphasizing the need for support, the result of which, would be dependence, an "all's well" atmosphere, and an over reaction to any display of tension in the group.

Some Supportive Behaviors:

-acting to reduce excessive conflict
-behaving in an open, friendly fashion
-encouragement when individuals attempt difficult/risky tasks
-relieving excessive tension
-positive reinforcement

Some Behaviors that Encourage Group Growth:

-turning questions back to the group as a whole
-identifying successful decisions made and responsibilities assumed by group
-encouraging practise of service roles by group members

Maintenance Functions

-compromizer
-tension reliever
-evaluates emotional climate
-process observer
-standard setter
-active listener
-trust builder
-interpersonal problem solver

5. Controlling Group Movement

The facilitator's control over group movement can range from autocratic to laissez-faire, neither of which is seen as preferable by this learner. Influence and control on the part of the facilitator is undeniable. It is necessary for the Trainer to evaluate his performance in this area and alter it in accordance with professional ethics and feedback received.

6. Maintaining Membership in the Group

The facilitator must learn by evaluating his own behavior, the degree to which he should demonstrate behavior(s) as a facilitator, as well as behavior(s) that maintain his status as a group member.

3.5.1 CRITERIA FOR FACILITATOR ASSESSMENT

1. evokes formalized personal objectives of participants

2. evokes participant response to stated group objectives (logic of content)

3. identifies presence of group objectives not formalized

(hidden agenda)

4. recognizes cues revealing logic of relationship among participants

5. awareness of cues indicating individual's ease with beginning phase of program

6. awareness of non-verbal messages among participants

7. awareness of participant cues indicating kinds of transition activities needed

8. awareness of the degree to which participants are experiencing an integration of content and process

9. familiarity with many learning styles

10. familiarity with behaviors indicating preferred learning styles

11. familiarity with behaviors indicating kinds of established relationsnips among participants

12. sensitivity to fit of content and process

13. belief that actual group needs override previously assessed needs

14. sensitivity to environmental influences on the group

15. sensitivity to mood of group

16. flexibility

17. consciousness of whole group and overall interaction

18. analyzes relative importance of many possible outcomes with process

19. analyzes relationship of process to logic of participant relationship

20. enhances quality of relationship

21. identified process continually matching changing participant needs

22. analyzes data in manner relevant to overall process

23. demonstrates reasoning skills

24. demonstrates observation skills

25. belief in importance of evaluation

26. attitude toward evaluation being a means not a goal

27. belief that progress is evidenced when something that was unknown to any individual in the group (including the facilitator) becomes known through the group process.

3.5.2 CRITERIA FOR PROCESS PLANNER

1. seeks valid information relative to group purpose

2. seeks disconfirmation of acquired information

3. involves participants in program purpose setting

4. designs plan ensuring practical application of knowledge during session

5. designs for diversity of learning styles

6. designs for joint control of tasks

7. designs for learning-oriented group norms

8. designs for high risk-taking behavior

9. designs for avoidance of win/lose situations

10. designs to surface attitudes towards expression of negative feelings

11. designs to surface attitudes toward description of feelings of emotion

12. designs to surface attitudes toward advocacy with unilateral control

13. designs for constant monitoring of plan implementation

14. designs for frequent public testing of theories

15. designs for reflection time on learning experiences

16. organizes phases of process to move with simple logic

17. provide for a variety of ways of maintaining active involvement of all participants

18. takes into account possibility of shift from assessed needs during design to needs arising from actual interaction

19. knowledge of various roles of facilitator in the process

20. knowledge of various possibilities of role of participants in the process

21. characteristic of keen-wittedness (to develop)

22. develop imagination traits

23. develop creativity traits

24. demonstrates methods which are time-efficient

25. demonstrates methods which are data-gathering efficient

26. demonstrates methods which are simple from the point of view of literacy demand on participants

27. demonstrate a method which have little demand for imaginative thinking

28. demonstrates methods which have little administrative demand

29. organizes data

30. allows for use of data antecedent to the process

31. allows for use of data consequent to the process

32. uses an organized, efficient coding system

33. uses an organized:

-file folder or card entry for each item in task analysis
-annotated reference cards for bibliographical material
-self-composed papers: qualities of person characteristic of a facilitator
-self-composed papers: moral qualities of a facilitator
-"appendix" file using same coding system

34. knowledge of summative evaluation techniques

35. knowledge of formative evaluation techniques

36. information concerning importance of evaluation

37. conviction of positive value of good design on evaluation phase of process

38. belief that evaluation be unobtrusive

39. clear distinction between process of group, content of

group and importance of participant role in interaction.

3.5.3 CRITERIA FOR INTERACTION WITHIN THE GROUP PROCESS

1. encourages participants:

-to participate verbally
-to practice acquired knowledge during session
-to practice acquired skills during session
-to review acquired knowledge between sessions
-to review acquired skills between sessions
-by acknowledging their attempts to apply knowledge
-by acknowledging their attempts to apply skills
-to describe directly their feelings
-to make personal statements

2. sets a standard of performance by refraining from repeating verbal input

3. demonstrates communication skills

4. seeks clarification of input

5. builds trust

-by expressing acceptance of person participating
-by preparing participants for activities in a trusting manner

6. actively listens by responding:

-to expression of feeling
-to suggestions of participants

7. coordinates interaction by controlling duration of participant verbal input

8. flexible director of process:

-use of resources
-involvement in activities requiring:
--use of acquired knowledge
--use of acquired skills
-in clear, concise language

9. elicits evaluation:

-of satisfaction with attainment of objectives for session
-of facilitator coordination
-of facilitator encouragement
-of facilitator use of ordinary, clear, concise language
-of usefulness of session

--for information-gathering
--for skill-acquiring
-of participant personal behavior which characterized session

10. acts as reality-tester by having participants relate ideas of session to their own reality

-affirmer of personal dignity
-information-giver
-summarizer
-process observer
-confronter
-evaluator

3.5.4 CRITERIA FOR FACILITATOR IMPLEMENTATION

1. evokes points of view from participants

2. enables point of view to take shape from group

3. evokes criteria for judging attainment of group learning outcome

4. introduces initial activity which allows logic of relationship amongst participants to be dealt with

5. evokes termination time for process at beginning of process

6. reinforces participants activity appropriate to the learning outcome

7. speaks clear, concise ordinary language

8. keeps facilitator verbal input to a minimum

9. models appropriate communication skills

-supportive listening
-owning behavior

10. reinforces process related to actual group needs

11. values the process as being related to the degree to which each member's contribution is considered unique and necessary

12. expects the unexpected to occur

13. confront the validity of group task

14. confront the values underlying task

15. identifies jointly behaviors flowing from convention

16. identifies jointly conventional behaviors perpetuated by personal choice

17. clarifies habitual win/lose behavior

18. clarifies behavior seeking unilateral control

19. clarifies tendency to hold private perception of events

20. assists in consideration of alternate behaviors to those practiced

21. elicits joint establishment of group norms which are learning-oriented

22. controls tasks jointly

23. applies immediately new behavior to specific situation

24. formulates plan for behavior application to situations in general

25. practices self and other-protective behavior as joint enterprise

26. evidences minimal defensive behavior

27. seeks inquiry about advocated position

28. shows awareness of levels of anxiety, vitality, self-esteem

29. tests by immediate application knowledge gained from experiences

30. high-risk taker

31. internalizes commitment to a choice

32. explicates tacit knowledge

33. responds to observable data

34. confirms attribution sought from person about whom attributions are made

35. publicly tests theories

36. seeks disconfirmation of behavior

37. coordinates relationships between participants' task and process outcomes clear

38. keeps relationship between facilitator and participants' outcomes clear

39. directs evaluation with minimal facilitator oral input

40. introduces appropriate evaluation instruments & methods

41. easily interacts with participants

42. confidently interacts with participants

43. arouses confidence in participants thru manifested attitude

44. sensitive to evaluation being a means which must suit participant learning outcomes

3.5.5 CRITERIA FOR COORDINATING EVALUATION

1. ascertains whether the expressed needs of participants were dealt with

2. ascertains if facilitator imposes needs on group

3. matches pace of process with participant needs

4. matches pace of process to participant abilities

5. provides opportunity for relevant activity involvement

6. maintains a balance between coordinating behavior and encouraging flexibility of direction of purpose

7. sensitive continually to appropriateness of process component to participant interaction

8. knowledge of skills evidenced in flexibility of direction of process

9. knowledge of human behavior evidenced in calmness of facilitator in face of participant interaction

10. display quality of authority not authoritarianism

11. confident in adequacy of facilitator skills

12. belief in adequacy of ability of participants

13. confidence in importance of facilitator knowledge

14. acceptance of facilitator limitations

15. belief in importance of knowledge of participants

16. acceptance of limitations of participants

17. desires to cause change for the better through this group interaction

18. belief in desire of participants to change for the better

19. belief in ability of participants to change for the better

20. recognizes beneficial data which is relevant

21. recognizes beneficial data which indicates direction of process

22. monitors individual and group learning attainments

23. integrates evaluation into total group process

24. determines effectiveness of application of new knowledge

25. determines outcomes sought from situation

26. determines action required for specific outcome

27. monitors both technical and interpersonal competencies

28. encourages publicly testable feedback

29. minimizes negative, positive, attributive comments as feedback

30. seeks evidence of change in values

31. surfaces dilemmas naturally

32. surfaces inconsistencies in behavior

33. surfaces incongruencies in values and behavior

34. evidences action/reflection/action manner of behaving

35. monitors jointly the behaviors of learning

36. encourages productive experiencing of reflection time

37. monitors behavior to surface incompetency in self rather than in others

38. encourages the articulation of desire for change

39. judges actual process attainments against proposed organized and coordinated purposes

40. accepts responsibility for consequences of behavior choices

3.6 REFLECTIONS ON THE MANAGEMENT OF THINKING & FEELING

[Presented at the national conference of trainers in the addictions field by John R A Dobson]

When I read the summaries of the excellent papers presented over these days, I became concerned that as managers of adult education programs attention was being focused on the structural-functional aspects of training at the expense of the creative and motivational. I believe that all are of equal importance, although I will direct my remarks principally to the latter two.

Recent literature in adult education has highlighted two essential elements in human learning:
1. the cognitive practices of learners,
2. and the motivational aspects of learning management.

Cognitive learning has often been described as being able to recognize the relationship between apparent diverse phenomena. It has been postulated (Gerald, 1979) that thinking takes one of two general forms.
1. It may involve seeing how two different pieces of information relate to one another,
2. or it may involve seeing how a piece of information relates to a problem.

The first kind of creativity results in the recognition of a phenomenological link or pattern. The second kind results in the solution to a pragmatic problem. The more obscure the relationship between two phenomena, the more creative the act of recognition or understanding as to how they relate to each other.

A complementary element in this view of cognition is "differentiation ability", or the capacity to perceive differences within a given body of data. Low differentiators tend to see the world as more uniform than it is, emphasizing its standard, regular, predictable elements. High differentiators emphasize the diversity and variation in the world, paying special attention to anomalies or apparent inconsistencies.

Differentiation is then the opposite side of association. To put it another way, differentiation is important in perceiving a problem, and remote association in solving it.

It has recently been suggested that differentiators are right brain functioners while associators are of the left brain (Gerald, 1969). Be that as it may work in problem solving (Brunner, 1963; Piaget, 1969) styles (Kolb, ;

Gerald, 1979; Dimock,1970) has clearly pointed to the tendancy of adults to tackle problems are very divergent in approach. It is suggested (Kolb,) that adults tend to in one of two bi-polar ways. The first is immediate experiencing of the problem then observing and reflecting on it; the second is abstracting the problem and conceptualizing possible solutions followed by active experimentation with these solutions to the problem. Those who act then reflect are divergers, and those who conceptualize then experiment are convergers. Those thinkers who are called divergers or differentiators sits astride the praxis of action-reflection while the convergers or remote associators adhere to the scientific method. The fundamental difference between divergers and convergers is that the former tend to want to start with an experience while the later first want to think about it. Two other types exist, learners who tends to be high on active doers and those who tend to be active thinkers, each with little regard for the function of the other. cum reflective observer can be characterized as an assimilator.

Recently I experienced two graphic examples of what learning styles mean to the actual behavior of people. In one group I played the "Castles in the Sky" exercise very much as we played it here on Monday; several randomly selected groups. The resulting castles were similar. In the other group, I divided the participants by their extrememost polarity, very much as I did with you in another experience. The resulting castles in the four groups were dramatically different in both planning and in execution. The doers built a square solid castle; the divergers tried to build the prettiest castle; the convergers drew a tiny castle in the middle of the three un-cut sheets of bristol board; and the convergers tried to build the highest castle possible in one dimension. Four radically different solutions, eventhough all worked from a mutually agreed upon objective, and were given the same conditions. The most exciting aspect of the exercise was not the building of the castle, rather it was in the dialog that took place afterwards when all four groups grappled with their differences. This experience, & many others like it, suggests that through dynamic interdependent learning a more creative synthesis is possible. Others describe this event as synergy (Hampton-Turner, 1970), or a gestalt like learning moment, or what might be called the unity of contraries (Buber, 1958). Indeed, they are all exploring the age old argument as to the nature of reality; as to whether we create knowledge more appropriately by moving from the particular (real) to the general (abstract) or the general to the particular. Aristotle and Plato started that argument.

Now why is this discussion important to adult educators ? Because it questions the notion of the individual learner as being the most useful vehicle for creative problem solving. The premise is that learning, change, creativity, or problem solving most effectively takes place in a social setting where opposed styles are encouraged to dialog and achieve new solutions to old problems.

There are some fundamental premises inherent in creative group learning:

1. Persons have, because of isolation and an experiential conditioning, learned to be "helpless" (Segliman, 1975) or "incompetent" (Sergent, 1979) and consequently are unable to act to solve given problems.
2. Through participation in a group process (Ohlsen, 1970; Rosenthal, 1978; Bandura, 1978,1979) where belonging (Cartwright, 1968), trust (Freire, 1968; Rotter, 1980), and openness (Hainer, 1968) allow for risk-taking (Torbert, 1978) persons can participate in an innovative (Botkin, 1979) learning experience in order to prepare for anticipated change (Foster, 1980).
3. Confrontation (Hampden-Turner, 1972; Torbert, 1972) between persons within a group gives way to collaboration (Thelen, 1960) as learners "name the world . . . [in] an act of creation" (Friere, 1968), thereby gaining a "meaning perspective" (Merzirow, 1979) or a sense of purpose within their "immediate reality" (Torbert, 1972).
4. Central to group learning is the notion that through personal affiliation (Schacter, 1959; Marlowe, 1969) and cooperation group ~~achievement~~ motivation (Weber, 1967) can be engendered in the learners. Thus, the conventional continuum of affiliation to achievement is transposed into a bi-polar model (Beles, 1968) where both are enhanced.

A major concern I have, however, in advocating social or gr learning, as opposed to individual, is that it implies a a rejection of the other position. After almost two decades of hearing the virtues of individualization it is impossible to reject it out of hand. In fact, it is preferred by people with divergent styles; similarly, group learning is preferred by people with convergent styles. Indeed, both the affective need to belong & the need to be free are inherent in all humans, and very often when one need has been satiated the the other becomes the driving force behind behavior. This propriorceptive oscilation is an important balancing force which must be accounted for by managers of learning, since it suggests that each is most appropriate at certain times.

As responsible program designers we might very well take a good hard look at how the participants in our workshops approach thinking & feeling, so that we can include in our desig appropriate patterns of experiencing learning for all.

It is relatively easy to postulate learning principles; it is much harder to come up with practical methods for achieving their goal.

Conventional wisdom suggests that if the learner can in some way articulate her or his learning goal, if the gap between present ability and that aspired to can be accurately assessed, and if manageable objectives leading to observable behavior changes can be set down, then the learner will be motivationally "locked-in" to wanting to learn whatever it was s/he felt a need to learn. The steps suggested in this organizational method have been thoroughly described in the excellent handouts you already have read; now I ask, why do they often as not only marginally succeed ? Conceptually they are very appropriate. Initially they seem to give a lift to the learning environment. Indeed, often learners frequently depart from the experience with a good feeling towards their learning colleagues, and sometimes even towards the manager, facilitator or moderator. And yet there is an ultimate letdown when it is found that no apparent learning took place.

Over the years numerous strategies have been suggested as a means of sustaining the learner's motivation for learning; heavy uses of media, learning by doing, experiences created through simulations and role playing, and of course games and exercises, to name just a few. All very important; no doubt about that. Indeed we are using all of them during Exchange 80 to try to keep us on a learning track.

But a very critical element is missing; the continuous, personal appraisal of learning. This intimate examination and judging of learning at any given moment during the experience is a very delicate matter indeed. Periodic appraisal of learning, whether by the learner or by another, has as its purpose the redefining of the learning objectives set down for the experience. Perhaps the major weakness in the organizational method outlined is that objectives seemed to be carved into stone, and quickly become dissonant with the developing needs of the participants (Argyris, 1978; Zais, 1976; Shreenan, 1979) Appraisal then allows for the fine tuning. It also serves to discipline the participants, both manager and learners alike. When the feedback is interactive and pointed it serves to sharpen the performance of both. The intructor has a responsibility to reinforce the learner, and the learner has the right to claim appropriate appraisal feedback from the manager.

It is incumbent upon the manager to ensure that conduits for frequent interactive and reinforcing appraisal be designed into any learning experience. The principle of shaping reinforcement (Skinner, 1969) comes into play as the social interaction is made rich with positive and negative cues designed to clearly enhance or drain the environment of its motivating energy. The smile, the nod, the supportive statement will serve to encourage the learner to articulate a particular concept; similarly the frown, the wayward glance, the non-supportive or non-relative statement will cut off even the most creative of ideas. Where Skinner used food to meet his pigeons' needs, we focus on higher order needs such as to sense freedom, self-actualization as well as to sense belonging, intimacy. And satisfying them is just as effective a controller of behavior as bird seed ever was.

The strong movement away from teaching and towards facilitation was an attempt to place responsibility for learning more firmly in the hands of the student; a very important step forward. Unfortunately, one step forward often results in another step backward. In the case of group facilitation its excessive application has undermined meaningful appraisal of learning since the facilitator shuns this important role. Indeed learners are often left with the confusing task of trying to determine what's happening during their learning experience for they are receiving positive feedback from the group facilitator when they themselves sense that what they are saying, or doing, isn't really all that great.

While I'm being critical of one aspect of facilitator behavior I am not rejecting all the important methodological advances which have decidedly improved the learning environment; what I am urging is that we, as managers of learning environments recognize our ultimate responsibility to ensure that participants receive appropriate reinforcing feedback as to their actual learning. I believe that people want to be better at what they do; I believe they are constantly judging their knowledge and skills against standards that have been established initially by the group and ultimately by themselves. And I believe that their successful development is in direct relationship to the internally or externally generated appraisal that they receive.

The essence of human kind is her/his thoughts and feelings. When we accept a role in the management of human learning we are accepting a responsibility with those persons who are entrusting themselves to our ability to competently interplay their thoughts with their feelings thereby creating a dynamic process both within the person and amongst the participants of the learning group. This is our trust.

ADULT LEARNERS
AND
EDUCATORS
NOTES & QUOTES
ON THE PLANNING OF
THINKING, FEELING & DOING

prepared by

John R A Dobson
Department of Adult Education
SAINT FRANCIS XAVIER UNIVERSITY

4. Planning

Allo, Ausubel, Burns, Belkin, Broschard, Davis, Debert, Dewey, Franseth, Gage, Green, Gagne', Goulet, Hebb, Houle, Howe, Johnson, Kemp, Knowles, Lau, Maslow, Monette, Newell, Piaget, Porter, Schwab, Shreenan, Sergiovanni, Srinivansen, Simon, Tough, Wright, Young, Zahn, Zais, Zahn,

4.1 Learning Outcome
4.2 Introduction
4.3 Definition
4.4 Models
4.5 Issues
4.6 Principles
4.7 Unexpected
4.8 Elements
4.8.1 Goal Achievement
4.8.1.1 Value [Informing Behavior] Change
4.8.2.1 Needs
4.8.2.2 Actualization
4.8.2.3 Requirements of Adult Functioning in Society
4.8.3 Objectives
4.8.3.1 Introduction
4.8.3.2 How to Write
4.8.3.3 Another View
4.9 Curriculum Development [pending]
4.9.1 Tasks
4.9.2 Skills
4.9.3 Rudiments
4.10 Plans for Group Learning
4.10.1 Introduction
4.10.2 Seminar Plan
4.10.2.1 Induction
4.10.2.2 Setting Seminar Learning Outcomes
4.10.2.3 Subject Content Presentation
4.10.2.4 Integration
4.10.2.5 Closing
4.10.2.6 Stimuli
4.10.2.7 Questioning
4.10.2.8 Reinforcement
4.10.2.9 Punishment & Extinction
4.11 Suggested Further Readings
4.11 Organizational Elements Model

5. Assessment, Appraisal, Evaluation; Points along a continuum

5.1 Learning Outcome
5.2 Introduction

Carter, Costello, Grotelueschen, Griffin, Knowles, Scriven, Silvern, Steele, Weiss,

5.2.1 Process
5.2.2 Participant Involvement
5.2.3 Professional's Role in Self-directed Learning

5.3 Assessment of Learning Needs

Bergevin, Broschard, Cotting, Harless, Kaufman, Lee, Lowe, Monette, Price, Rauch, Trimbly, Tyler,

5.3.1 Definition of Assessment
5.3.3 Needs Assessment Models
5.3.4 Self Assessment as an Adult Educator

5.4 Appraisal

Annett, Belkin, Berman, Eye, Gagne', Foster, Fuller, Gage, Gilber, Knowles, Miller, Murphy, Popham, Rouecke, Scriven, Skinner, Steele, Stufflebeam, Tucker, Tyler,

5.4.1 Formative Appraisal
5.4.2 Shaping Reinforcement
5.4.3 Regimes of Informative [Appraisal] feedback
5.4.4 Normative Sequence

5.5 Evaluation

Ausubel, Belkin, Bergevin, Boyle, Carter, Coombs, Dickinson, Gagne', Grotelueschen, Houle, Nadler, Popham, Steele, Zais,

5.5.1 Definitions
5.5.2 Summative Evaluation

5.6 Criteria for Judgement

Bloom, Krathwold, Simpson, Stienaker,

5.6.1 Normative
5.6.2 Cognitive
5.6.3 Affective
5.6.4 Psychomotor
5.6.5 Experiential

5.7 Research Techniques

Babbie, Driscoll, Fox, Gephard, Houle, Kerlinger, Miller, Morgan, Selltiz, Steele, Tiffin, Zais,

5.7.1 Goals
5.7.2 Locating the Problem
5.7.3 Hypotheses

5.7.4 Review of Literature
5.7.5 Sampling
5.7.6 Experimental Design
5.7.7 Measurement
5.7.8 Analysis of Data
5.7.9 Application or Result

5.8 Validity and Reliability
5.8.1 Validity
5.8.2 Reliability

5.9 Information Gathering Techniques
5.9.1 Delphi
5.9.2 Observation
5.9.3 Questionnaires
5.9.4 Interview
5.9.4.1 Key Consultation
5.9.4.2 Group Discussion
5.9.5 Rating Scales
5.9.6 Other Sources of Information
5.9.6.1 Print Media
5.9.6.2 Tests
5.9.6.3 Records
5.9.6.4 Work Samples

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4. PLANNING

4.1 LEARNING OUTCOMES

After you had read this summary and reflected on related past experienes, you will be able to:

1. define the basic concepts,
2. articulate the relationship between the concepts and your own experience,
3. initiate an analysis of learning programs with reference to the vocabulary and concepts presented,

to your own, and your significant other's, satisfaction.

4.2 INTRODUCTION

Planning is crucial to successful learning. Involvement of the learner in the planning ensures greater propensity to learn. While and including criteria for evaluation has become an accepted practice, provision must be made for the unexpected. A major aspect of any adult learning program is the planned experience, and it is indeed this important component that ensures no two programs are achieved in the same way.

The following are quotes and comments by authorities in the field of adult educational planning. While not exhaustive it does include the basic elements requisite for an effective plan.

Many authors have expressed their concern as to the importance of planning to lead to program achievement. Facilitators of workshop experiences require "at least the baseline skills for coordinating & evaluating the group process." (Davis,1974)

It is important to integrate effective organization, implementation & evaluation skills with the ability to deal with both conflict & feeling. Lau's (1975) case studies go on to provide descriptions of effective designs & also highlight participant activities.

Emphasis on the planning of task & maintenance facilitation behaviors within the group learning process cannot be over-stated (Johnson, 1975).

The adult educator needs to consider the importance of setting tone, mood or climate, as well using such techniques as contracting, & resource person intervention to help release emotions and thereby facilitate learning (Gage, 1975).

There are six necessary planning questions:

1. What is the question to be answered?
2. What data is required to answer the question?
3. What are the sources of the required data?
4. How will this required data be collected?
5. How will it be analyzed to answer the question?
6. How will the answer be presented? (Knowles, 1970).

4.3 DEFINITION

Definition of program planning:

> A method of identifying needs of the individual (institution or society) assigning priorities, setting goals and designing objectives, activities and evaluation procedures to meet the goals; program planning is a tool which charts the course of the program beforehand to increase the chances of arriving at the specified objective.

4.4 MODELS

This brief survey of models for planning non-formal learning experiences points to the importance of identifying, together with the learner, his/her goals or wants, then determining the discrepancy between the current reality and the aspired to goals. These needs then must be translated into criterion referenced objectives which can be measured through an evaluation of the experience and its resultant learning. The several points will be expanded upon subsequently. An example of a learning design model is:

> A process plan - a projection of a flow of events - for accomplishing a given set of objectives in a sequence guided by a conceptual scheme. (Knowles,1970)

This model is later expanded as an andragogical design model thus:

> It involves choosing problem areas that have been identified by the learner through self diagnostic procedures, and selecting appropriate formats for learning, designing units of experiential learning utilizing indicated methods and materials, and arranging them in sequence according to the learner's readiness and aesthetic principles (Knowles, 1973).

Another manner of examining curricular models is by type:

1. the informational model is based upon methods for processing data;
2. the problem solving model is a systematic procedure for identifying problems, determining alternative courses of action, selecting one, and evaluating the

action taken in order to determine if the problem remains;
3. the projective model analyzes the existing state of affairs in terms of their historical development and then projects strategies for learning that are compatible with that state; generally, all variables are controlled (that is left constant) except the one that most directly influences the desire for learning;
4. the expressive/creative or self-actualized model establishes an environment which will evoke a learning response (Srinivansen, 1978).

Similar to the projective model there is the developmental learning process. It is based upon two premises:

1. that learning is a process with certain stages (Piaget,),
2. that the learning program must be subjected to constant revision in order to keep up with the learner's development (Debert, 1979).

Process considerations in planning:

1. Select appropriate resources
2. Choose appropriate leadership
3. Select and use appropriate methods
4. Scheduling time
5. Divising a logical and interest- maintaining sequence
6. Provision social reinforcements
7. Readily adjust to nature of participants
8. Clarify roles and relationships of participants
9. Identify evaluation criteria
10. Explaining the design to the participants so that the objectives and format are understood (Houles,1976).

Another check-list for planners:

1. Identify a common interest or need amongst participants
2. Develop topics
3. Set goals for activities
4. Select appropriate resources
5. Select appropriate educational techniques and sub-techniques
6. Outline each session, and the various responsibilities to be carried out (Bergevin, Morris and Smith, 1963).

The features of an activity centered curriculum can be summarized as follows:

1. The structure is determined by the learner's felt needs;
2. Such a curriculum cannot be preplanned in the

manner of subject-centered design;
3. Facilitator & learners cooperate on the planning;
4. The focus is on problem-solving procedures for learning.
This approach leads to "process" objectives (Zais, 1976).

In a mechanistic analogy to process planning:
When forces are applied in the operation of the machine a chain-like sequence of events result; and since these forces are ..., the immediate causes ... complete prediction is possible ..., eminently succeptable to quantification (Knowles, 1973).

In designing an experiential program, once individual needs have been properly diagnosed, the essential features are:
Objectives - determination of learning experiences and resources to meet them
Evaluation - to determine if they have been met (Gagne, 1973).

Another design model suggests that the learner:
Design & conduct his program with the realization that it is based on his own uniqueness, that it has meaning only as it changes him, and that at every point he must be its master (Houle, 1972).

Questions that should be considered in planning a learning program:
-What are the target behaviors? Can they be identified?
-Are individual or group distinctions taken into account?
-Is there contingency planning, and learner selected reinforcers?
-Are learners aware of the appropriate behavior to bring about reinforcers?
-How were practice included; what were its limits? (Belkin, 1977 [cited by Murphy, 1979])

Contingency management is a technique for approaching a learning situation by :
1. making sure that there are as few aversive conditions as possible in the environment when the learner is engaged.
2. making sure that the consequence of the engagement is positive rather than negative.
3. making available appropriate models of behavior for the learner.

The usual tasks performed by the self-directed learner are:

1. DECIDE ABOUT A SUITABLE PLACE.
2. CONSIDER OR OBTAIN MONEY.
3. CHOOSE HIS GOAL -- within the constraints of the curricula of the training session.
4. DECIDE HOW TO ACHIEVE THE GOAL -- limited to the learning resources available; in some cases, only one mode.
5. DEAL WITH LACK OF DESIRE FOR ACHIEVING THE GOAL -- the facilitator and other participants assist in this task.
6. DEAL WITH DISLIKE OF THE NECESSARY ACTIVITIES.
7. DEAL WITH DOUBTS ABOUT SUCCESS -- encouragement given by the facilitator and other participants.
8. ESTIMATE LEVEL OF KNOWLEDGE AND SKILL -- co-operative evaluation, student and facilitator.
9. DEAL WITH DIFFICULTY IN UNDERSTANDING SOME PART -- obtain assistance from facilitator, or other participants.
10. DECIDE WHETHER TO CONTINUE AFTER REACHING SOME GOAL. (Tough,)

4.7 UNEXPECTED

Planning is a critical part of any individual or group learning experience. You as an adult educator must consider all possible eventualities that might occur within a planned experience; & then, "expect the unexpected!" (Dewey, 1957). Caution must also be taken not to be too controlled by the plan: occasions which are not & cannot be foreseen are bound to arise wherever there is intellectual freedom. They should be utilized. But there is a decided difference between using them in the development of a continuing line of activity & trusting them to provide the chief material for learning (Dewey, 1957).

And further on capitalizing on the unexpected in planning a learning program, Comprehensive research on creativity confirms the importance of facilitator sensitivity to the events taking place in the process. It is often, Zahn (1966) notes, during this moment of unexpected change that an insight, or synthesis, takes place.

4.8 ELEMENTS

4.8.1 GOAL ACHIEVEMENT

The necessary first step in any non-formal educative plan is the assessment of learner wants or goals. Definition of a goal:

- The end result, immediate or remote, which the learner is seeking;
- a more general, global term than "objective", and encompassing many terminal objectives.

The literature on planning is replete with philosophical points of view. Existentialist, behaviorists, humanists, cognitivists and others have built descrete curricula on the premises, laid down in their philosophical view of human learning. The differences in emphasis as to direction and process are but a reflection of their view. Since goals are more holistic & general theorists that focus on the particular, the discrete, do not usually discuss learning in terms of goals, since they are not sufficiently specific.

"Man behaves in terms of what is real to him and what is related to his self at the moment of action" (Knowles, 1973). Consequently, for the existentialist a goal emerges from human interaction with reality.

To the Gestalt psychologist goals are present end situations, and as such modify learning thru the principle of closure.

The ultimate goal of learning, from a cognitivist view point, is to know something. A person who is optimally developed, is innovative, flexible, & decentreate (Belkin, 1977). In the final analysis the goal of learning is competence, and this necessarily is manifest as both cognitive and behavioral. Such competence will be reflected in the learner's attitude. (Belkin,1977).

4.8.1.1 THE STUDY OF VALUE [INFORMING BEHAVIOR] CHANGE

Perhaps the strongest humanist statement is made by Argyris (1976) while using a slightly different focus -- instead of discussing "goals" he refers to "values informing behavior" states that the first tasks rise out of the need initially to look at values informing behavior or "learning to change underlying values and assumptions".

> Many adults are cynical about their power to bring about basic changes in the organizations which influence their lives. As Argyris observed, in many

cases in North American society, group and organizational factors seem to have taken on a life of their own. Adults are discourages by the complexity and interdependence of bureaucratic systems. They cannot identify the place to begin a change which will affect the whole system. Those who sense a responsibility to bring about change do not know where to begin an effective theory of action. Others, unaware of their responsibility, dismiss intolerable situations by regarding organizations as unchangeable. Argyris' attempts to deal constructively with this dilemma. He advocates examining values informing individual behavior as a first step in organizational change.

Adults are able to bring about organizational change, then, in proportion to their ability to bring about change in their own behavior. This kind of change takes time and often the help of a group. Once an individual has identified the values informing his habitual behavior, his next task is to identify those values informing behavior he envisions as ideal. Argyris has designed these tasks of identifying values informing behavior, of identifying habitual behavior patterns, and of identifying values informing ideal behavior into a model of learning. He affirms that adults must first of all identify the theories of action which inform their behavior. This identification is difficult, if not impossible, to achieve alone. It is the group involved in self-identification of theories of action as a joint enterprise who can assist in this long, often discouraging, process. Once these theories are identified, then the adult learner can enter a process of envisioning alternative theories. It is only in the consideration of alternative theories of action that habitual practices can be let go. Again, this process is long, difficult, and in need of group support. The alternative theory becomes the person's theory in action only after repeated applications of it to actual dilemmas. The person looks for habitual congruency between theory and practice. Again, it is only within a group concerned with behavior change that productive feedback about congruency, or lack of it, can be acquired.

The facilitator needs to constantly examine the group's purpose for acquiring certain skills. Argyris holds that the leader's effectiveness as an information-gatherer (assessor), theory-tester (implementer), and responsible actor (evaluator) is dependent upon his commitment to those values which influence his point of view. He cannot handle all

> information for any given situation. From Argyris' observation of leadership behavior, he believed that persons acquire skills more quickly if they first of all internalize the values which are instrumental to the choice of those skills.
>
> Besides the importance given to identifying values in forming behavior, Argyris strongly advocates the necessity for identifying habitual behavior before seeking to acquire new behavior. His research indicates that this identification can be accomplished only by analysis of repeated performances whereby the actor is given feedback based on observable data. When the actor accepts his behavior as evidenced by the data, is dissatisfied with it and willing to learn from the conflict he is experiencing, there will be change in his behavioral patterns. The endurance of the change will be relative to the actor's willingness to repeat experiences of his attempts to practice new behavior. (Shreenan, 1979)

All formulations used in the study of values need to be made in the language & symbols of those being studied. Value studies must focus on integrated patterns of total value orientations in a human community. Total integrated patterns of value cannot be obtained if people are treated as objects of observation or interrogation. They must be associated to the process of studying their own values in their capacity as subjects or active judges of the study undertaken. (also Northrop, 1953) Images & conscious profiles of themselves held by individuals & groups express their values more adequately that descriptions, measurements, correlations or classificatoions dealing with their economic activity, political life, kinship structure, or intra-societal roles. Members of developing societies, while under study, should be allowed to appraise the value changes they are undergoing or which can be anticipated. Empirical research procedures ... must be allied to modes of reflection which are both philosophical and phenomenological. Fruitful generalizations about values & scaled needs can be gained only from permanent disciplined exchange among representatives of many walue systems in the process of being challenged by "modernity." (Allo, 1967)

Everything originates with living reality. But living reality comprises men, families, localities, regions & nations which, like all human realities, are wholes. (Allo, 1967 cited in Goulet, 1975)

Two kinds of knowledge will exercise themselves on this vital reality, brought to a state of clear consciousness:

1. Scientific knowledge will seek to analyze all components & laws with specificity;
2. Philosophical knowledge is essential an interrogation made to understand one's own life & to situate oneself in existence. (Allo, 1967)

4.8.2.1 NEEDS

The work of Maslow has had a great influence in the realm of needs. He described a list of basic human needs, the fulfillment of which, in part, influences human behavior. Briefly stated these needs are:

1. Physiological Needs: this refers to the basic physical human needs such as food, shelter, clothing, etc.
2. Safety Needs: these needs involve physical safety.
3. Love & Belonging Needs: this refers to the human need to give and receive affection, empathy and concern.
4. Esteem Needs: this refers to the human need for status, recognition, achievement and a positive self image.
5. Self Actualization Needs: this refers to the human need to reach one's full potential and attainment of inner satisfaction.

Any condition which has an effect on the learning environment can be associated either with the task for which the environment was created or the human aspect of such an educational environment; there is an interdependence and interrelating of human and task needs.(Davis, 1971).

4.8.2.2 ACTUALIZATION

However for the highest level of motivation to be achieved, the specific learning needs of the particular participants of a given learning activity must be self-diagnosed.

Learners are distinct individuals; who must be ready to learn; that is: have a need that they wish to act upon (Ausbel,).

In the final analysis it is the learner who controls his/her own learning behavior (Broschard,1977).

Hierarchy of needs:
Lower order:
Security
Socialization
Some extent esteem
Higher order:
Esteem
Autonomy
Self actualization
[(Porter,1962) in Sergiovanni,1971].

The hierarchy suggests that the need to self-actualize is "superior" to love & esteem needs. Such has been generally accepted in our autonomous, individualistic North American culture as a self-evident truth, because it neatly explains our reality. There is, however, no culture-free evidence to suggest that it is a world-wide phenomenon. Indeed, it hasn't even been proven in North America. What is more apparent is that humans have three equally valued higher order needs that fall into a particular hierarchy given conditions of circumstance, e.g. age, status, history, at a certain moment. The motivating paramount need being the one that is least apparent at that point. The propriorceptive oscillation discussed in learning seeks to maintain an equilibrium.

4.8.2.3 REQUIREMENTS OF ADULT FUNCTIONING IN SOCIETY

A cognitive view of human learning needs is usefully describes in the following excerpts. It is first necessary to take a look at what human beings do in a modern society. What are the main areas in which people function as adults, and what performances within these areas have been learned?

Survival Activities - The first area of functioning that comes to mind is their need to maintain themselves as individuals within a complex society. This requirement implies a basic competence in the use of language, including the special language of mathematics. Usually, this requirement is reflected in that part of the curriculum called the "basic skills". It seems reasonable that certain complexes of information are needed for survival purposes. Individuals need to have knowledge of health and disease, of food and diet, of societal laws and customs, of the locations of buildings and places in the immediate and surrounding environment, and many other things, in order to function as persons capable of independent decisions. Even certain basic attitudes belong in this survival category - attitudes of respect for other individuals, for authority and law, awareness of the interdependence of the individual and society, and perhaps others. As for motor skills, one can see that certain of these would need to be included in a "survival" package - printing or cursive writing, using hand tools, driving a motorized vehicle, for example. The kinds of cognitive strategies that characterize survival activities would perhaps include such "learning-to-learn" skills as strategies for attending to aspects of printed communications, forcomprehending the main idea of printed passages, for rehearsal to hold information in mind, for remembering steps in a procedure and the like.

IN ADDRESSING THE QUESTION OF WHAT ADULTS NEED TO HAVE LEARNED, PERHAPS THE FIRST AREA OF FUNCTIONING THAT COMES TO MIND IS THEIR NEED TO MAINTAIN THEMSELVES AS INDIVIDUALS WITHIN A COMPLEX SOCIETY Vocational Activities - Going beyond mere survival, another large set of activities that make up the lives of adult human beings are those performances involved in their jobs and lifetime careers. The description of jobs and job-tasks (Miller, 1963) provides a firm basis for the identification of the skills and knowledges required in families of jobs. Obviously, intellectual skills are required for almost any kind of job-related performance - the concepts and rules (principles) that must be learned to make possible job competence, whether these apply to the personnel counsellor or to the bricklayer. Motor skills are crucially involved in some jobs (e.g., carpenter), whereas they are not all prominent in others (e.g., radio announcer). Information in the form of knowledge about things, people, and circumstances encountered in the execution of job tasks, is naturally an essential component of what must be learned. Attitudes of carefulness, safety and pride of workmanship are involved. A variety of cognitive strategies relevant to the problem-solving tasks required by the job must also make up a learned repertoire of the job incumbent. In part, at least, it is these strategies that distinguish the expert from the novice (cf. Simon, 1979). Many cognitive strategies are acquired through job experience, rather than direct instruction.

THE FULL MEANING OF "APPRECIATION" MAY BE VIEWED AS GOING BEYOND IMMEDIATE ESTHETIC ENJOYMENT CONVEYED BY SENSORY INPUTS TO A SOMEWHAT MORE EXTENSIVE AND LASTING MENTAL ELABORATION OF THESE INPUTS Appreciation and Reflective Thought - When the survival and ocupational aspects of adult life have been considered, there appear still to be some parts remaining. Besides the "understanding" of their environments and their own activities, people are said to "appreciate" certain kinds of things and events which impinge on their lives. Appreciating in this sense means "being sensitive to the esthetic values" of some event, product, or phenomenon. No doubt there are large individual differences in the kind and degree of appreciation people have for natural phenomena like sunsets or waterfalls, for products like sculptures and paintings, and for the symbolic creations of literature.

An additional dimension of this domain of human activity is reflective thought. The full meaning of "appreciation" may be viewed as going beyond immediate esthetic enjoyment conveyed by sensory inputs to a somewhat more extensive and lasting mental elaboration of these inputs.

Reflective thinking performs even another, not unrelated, elaborative function in mental life; it extends the activity of problem solving beyond the immediate circumstances of the problem situation. In the terms used by Newell and Simon (1972; Simon, 1978), reflective thought makes it possible for the

> thinker to expand his/her problem space beyond the immediate task environment. It may be supposed that this kind of elaborative thought is essential to invention and creative production. (Simon, 1979)

4.8.3 OBJECTIVES

4.8.3.1 INTRODUCTION

Objectives have been in the planning lime-light for more than a decade. Numerous authorities have defined them in a variety of ways. With the passing of time a concensus has been achieved on the definition, but no such concensus appears on the more fundamental question of their importance to the learning process. The comments stated below will generally support the behavioral position, however, criticisms of the excessive emphasis on objectives is also presented to attempt to give a balance to the subject.

4.8.3.2 DEFINITION

A behavioral objective representing the learner's own plan to achieve specific learning outcomes according to criteria which specify in comparative terms the minimum acceptable change in behavior, both quantitative and qualitative.

Terminal behaviors must be expressed in precise terms (Gagne, 1965).

Learning objectives must be both clear & specific (Gagne, 1973).

> An objective is a quantifiable and observable achievement accomplished under specific conditions. Goals are achieved through the accomplishment of objectives within an educational entity. Objectives should reflect the critical factors required for the accomplishment of a goal (Plowman,1971).

> In the use of performance objectives we try to find out for ourselves what the specific steps are that we wish our students to master. And if we fail on definding these specifics, the students will not achieve the broader goals of the subject. On the other hand if we over-emphasize those specific performance objectives, we will make for them less probable to achieve other more encompassing objectives. (Young, 1972).

Learning as taking place at the rudimentary level, these are grouped by skills, then tasks and finally objectives (Hebb [cited by Dubin,1973]).

Objectives readily divided into two kinds: "terminal" objectives and "interim" or "enabling" objectives; the former are the end product to be achieved at the culmination of the learning and the latter one the steps leading to the product (Kemp,1976).

4.8.3.2 HOW TO WRITE OBJECTIVES

Michael G. Burns

Department of Adult Education

"when you don't know where you are going, how will you know when you get there" MGB

For many of you, the skill of writing objectives is one that you have previously acquired and, subsequently, refined through practise. Consequently, these reading notes will serve to focus your attention on writing objectives in the nature of a review. For others, the writing of objectives will be a brand new experience and may, in fact, be frustrating. These reading notes, then, will serve as an introduction to writing objectives; the skill practise will take place later. In any case, the writing of objectives for your learning program is an essential first step that cannot be shirked and should not be delayed.

WHAT, THEN, IS AN OBJECTIVE?

Simply stated, an objective is an unambiguous statement of results to be achieved. As such, a well-stated objective must specify the observable behaviors that a learner would exhibit if the objective was reached. Mager (1962) states it somewhat more formally: "An objective is an intent communicated by a statement describing a proposed change in a learner - a statement of what the learner is to be like when he has successfully completed a learning program." No matter how you define it, an objective is a precise description of the performance the learning is intended to produce stated in terms of what the learner is able to do.

ARE THERE VARIOUS KINDS OF OBJECTIVES?

No, there are only "objectives", not various kinds of objectives. One of the major difficulties is a tendency to categorize objectives through the use of a multitude of descriptive adjectives. As a result, the learner is forced to choose between objectives that have been identified (to name only a few) as:

Educational
Major
Terminal
Transitional
Learning
Personal

Skill
Specific
Operational
Cognitive
Operational
etc.

Critical
Instructional
Global
Affective
Task
etc.

General
Behavioral
Performance
Primary
Means-Referenced
etc.

Unfortunately, what frequently happens is that the learner gets so wrapped up in trying to determine what they are going to call their objectives, that they spend more time and effort in defining and categorizing them than they do in writing and carrying them out. When writing objectives for your learning program, remember, an objective is primarily a learning tool. Adjectives should be used as descriptors only if they are necessary to make the objective more specific and understandable.

HOW SHOULD AN OBJECTIVE BE STATED?

In stating an objective, it is generally agreed that there are four components; namely:

1. A subject: the learner;
2. A verb: terms that identify what the learner is to do;
3. Given conditions: situations or circumstances under which the learner is to perform; and,
4. Standards: of quality or quantity that tell how well the learner is to perform.

An objective must be specific and must indicate, at least by implication, observable learning that would be acceptable as evidence that it has been achieved. It should be designed essentially as a communications instrument for those with a "need to know." For purposes of writing objectives for your learning program, this means:

1. The individual learner (you) who formulates the objectives and, therefore, will be held accountable for their achievement.
2. The advisor who must review and approve your objectives.
3. The advisor's colleagues, your peers and any others that may be charged with contributing to the attainment of the objectives.

Simplicity is the key to well-stated objectives. The learner would be well advised to use the KISS principle (Keep It Simple and Short) in the preparation and writing of objectives. An objective should describe, in the simplest terminology possible, the results the learner expects to achieve and, in so describing them, should make the process of achieving these results clearer and simpler.

IS THERE A FORMULA FOR STATING OBJECTIVES?

Not really! Since an objective specifies how the learner is to demonstrate that the desired learning activity has been successfully completed, learning outcomes are specified in measurable terms. Using the range of intellectual outcomes as they are outlined in a number of published and proposed taxonomies as a guide , the learner can define, as precisely as possible, what is to be accomplished. Once it is determined what is to be achieved in a learning activity or program, the learner is in a positon to decide how to demonstrate the acquisition of the desired competency.

A properly stated objective that meets the above specifications usually contains the following components:
performance condition
standards of success.
Mager (1962) suggests a process that, if followed, would result in a properly stated objective:

1. IDENTIFY the terminal learning outcome. You can specify the kinds of learning that will be accepted as evidence that the learner has achieved the objective.
2. try to DEFINE the desired learning further by describing the important conditions under which the learning will be expected to occur.
3. SPECIFY the criteria of acceptable performance by describing how well the learner must perform to be considered acceptable.

For the learner, the priority task is to answer these questions:

1. What must I do in order to indicate that I have mastered a certain content or skill that has been identified?
2. What conditions must be present for me to be able to do this?
3. What extent or what degree of expertise is required?

Consequently, a number of formulas exist to assist the learner in answering these questions during the process of writing objectives.

A cursory examination of these various formulas reveals that, in essence, they are the same and based upon the specification of the essential components discussed earlier. An example is, the "A-B-C-D Method of Writing Objectives for a Learning Program." Thus, the learner would determine:

A - audience or, in this case, the learner who must be involved in the attainment of the objective.

B - behavior or expected outcomes or what the learner is required to do.
C - condition or the framework or situation from which judgements are made in order to determine whether the behavior has indeed occurred.
D - degree or the level that the learner is expected to achieve.

Translating the above method into a formula for writing an objective might result in the following:

AS A LEARNER (audience), I WILL (learning outcome)

GIVEN (condition) ---------------------------
---;
TO A LEVEL (degree) ---------------------------
---.

WHAT ABOUT THE "SUBJECTIVES"?

A particularly gnawing question usually occurs to the forward-thinking learner about this time particularly as related to the area of personal capability improvements. The question most often asked by the anxious learner is: "What if I can identify certain intangible, but nonetheless critical personal capability improvements that I want to bring about, how can I come up with measurable objectives that will show I achieved them? For example, a learner may desire personal improvement in the area of humanistic behaviors and attitudes appropriate to group facilitation.

The simple answer to this is, "You can't!" These "subjectives" cannot, by themselves, be stated in measurable terms as previously described. If, however, you have determined that such improvement should be placed in objective form, you need to identify "specific measurable activities" which, if accomplished, should logically lead to such improvement. While there is, naturally, no guarantee of success, the measurable activities identified below each of the "subjectives" should result in some progress in the desired direction.

An objective of this nature is permissble if there is some overt behavior or product of behavior which is indicative - under appropriate specified circumstances - that the learning goal has been achieved. That is to say, that the learning goals be capable of identification by means of some kind of empirical evidence. The task, therefore, is not in measuring a set of overt behaviors but, rather, in specifying what evidence will be accepted that the intended learning has, in fact, been accomplished.

WHY WRITE OBJECTIVES?

Having provided a rationale for your learning program, the practical approach requires that effort be concentrated on specific statements of WHAT you will learn and HOW the learning will be accomplished. A set of objectives for your program is the most powerful learning tool currently available. By using objectives, the learner is better able to judge the quality of learning, and this process becomes a form of self-evaluation, thus assisting continued professional growth.

In addition to the above, a formal statement by the Department of Adult Education "requires its learners to state their own learning objectives in a formal style which clearly includes a given condition, a demonstrated competency, and a measurable outcome." However, there are also a number of functional reasons for writing objectives that focus upon the learner and the learning. They are:

1. MANAGING LEARNING - this suggests an active role by the learner. Given a set of objectives, the learner can plan a course of learning more effectively and rationally. Objectives can be used to guide the learner's learning efforts - assessing needs, designing appropriate strategies, implementing programs, evaluating results.

2. ENHANCING LEARNING - reinforcement of learning may be made more effective and explicit when the learner has a set of objectives paralleling the learning experience.

3. FOCUSING LEARNING - the writing of objectives focuses attention away from content and onto learning and this focusing often produces revision in learning strategies. As well, learners who write objectives for their own learning program are made aware of the difficulty of defining what it is they want to learn and of choosing among equally attractive options.

WHERE ARE YOU NOW?

At the beginning!

4.8.3.3 ANOTHER VIEW

Another view is that objectives limit the learning enterprise (Schwab,).

Objectives are roads to follow rather than terminal points (Taba,1962).

Objectives lie at the end of actions designed to lead them. Many good things in life are achieved by serendipity but an objective is not merely the attainment of a fortunate outcome (Houle,1972).

Objectives organically emerge in personal learning activities and are highly dynamic (Tough,).

There are different ways of coming to the same objective, however in any learning process it is important to focus on total development, including sensory-motor, language and cognitive....as well as social interaction (Belkin,1977[cited by Murphy,1979]). A further humanist confrontation of behavioral objectives is made when Monette (1979) states:

> The identified values [see Goals above] are not to be understood as terminal goals outside of educational activity, but rather as directions in & for educational activity. They are not intended as definitions of outcome, but rather as heuristic devices to be re-evaluated at turning-points in the educational activity & re-formulated, if necessary, in light of the educational transaction. Ends achieved, in this scheme, are not preconceived, but reflected upon in retrospect rather than in prospect.
>
> This way of conceiving educational purposes militates against an exclusively technical emphasis on behavioral objectives. The behavioral objectives model has been rejected because of its inability to come to grips with the problem of values & its violation of a humanistic notion of personhood & learning ... The use of behavioral objectives has been criticized on several counts including the following:
>
> 1. The outcomes of educational activity are too numerous & multidimensional to be specified in advance.
> 2. Some topics & skills are not readily amenable to standard quantitative measurement; e.g., art & human relation skills.
> 3. Conceiving the construction of educational programs exclusively as a logical function severely restricts the variety of ways that programs can be designed. The determination of objectives, for instance, does not in

practice always precede the selection of activities.

As we have seen, the emphasis on predetermined, fairly specific behavioral objectives is based on a production-line model of program planning. Planning is viewed in terms of the product of the educational process. The means, namely the educational activity, is logically ordered to the end, the specific behaviors to be learned. Such an approach devaluates the interaction of people, inasmuch as the open-endedness, fluidity & risk involved in human interaction are conceived as flaws in a logical system -- obstacles to the effective prediction & control of educational products & processes. The interaction of persons is viewed as a means to an end; the pre-determined "product" of education is given precedence over the people & the personal relations involved.

4.10 PLANS FOR GROUP LEARNING

4.10.1 INTRODUCTION

It is generally accepted that of the four architype learning styles, two - divergers & convergers - lend themselves to group learning, while the other two -thinkers & doers - lend themselves to individualized approaches. Differentiators tend to be more confortable in an action reflection mode often called praxis; convergers, on the other hand, tend to follow a conceptualizing & experimentation approach called the "scientific method".

The learning needs of divergent thinkers might be as follows:

Evoking introductory experience
Articulation of learning need
Tentative identification of a goal
Learning experience related to the goal
Reflection on the experience & possible applications
Articulation of a more precise goal
and a repetition of the cycle.

Adherents of the conceptualization - experimentation approach might change the plan as follows:

Introduction of the learning
Association of the learning to other similar learning
Identification of the learning "gap"
Articulation of a learning objective
Conceptualization of the learning
Participation in a learning activity
Generalization of the learning to other applications
Evaluation of learning outcomes

The similarities between the two are readily apparent; the differences are subtle. While both have thinking and doing built into the process, in each they are ordered differently. Similarly both seek to point the direction of the learning, in the former it is stated more tentatively than in the latter. In the former the doing is the basis of the learning while in the latter the thinking is the basis; the alternative then becomes the confirmation or validation of the learning.

While a teacher or facilitator might argue that since all aspects of the plan can be found in each, that it really doesn't matter that much if one ordering is followed instead of the other. What often occurs when a particular approach is followed is that those learners who prefer the alternative style find themselves at an immediate disadvantage. Often they are discouraged and don't perform at their optimum, sometimes they become disruptive.

The Seminar Plan described below was taken from a study manual prepared for facilitators of an Addictions Core Knowledge study program. It attempts to balance elements of both approaches, but tends to follow the latter.

4.10.2 SEMINAR PLAN

Planning seminars for groups that are being facilitated is structurally straight-forward, but operationally rather complicated. The structure of a seminar, which will be discussed below, is necessarily in outline form as the facilitator must be prepared to vary strategies & order events in response to the immediate needs of the learning group. It becomes somewhat complicated because the changes to the design cannot be made until after the seminar has begun, & the participants have actively initiated their learning experience. It is during the process of the seminar that the facilitator must be prepared to make the change or changes necessary, in order to ensure a successful seminar.

The seminar approach to learning has been selected for non-formal learning, because of its inherent flexibility, & dependence on learner preparation. It permits the learning format & sequence to vary with topic emphasis & learner ability. It also removes the burden of content preparation from the facilitator, & places it squarely on the participants.

The structural design that has been developed for this model program is a composite of three congruent designs: Saskachewan New Start, Continuing Medical Education at U.B.C., & SFX Micro-TV Training.

A non-formal program includes both independent & group study. Before participants initiate a seminar, they are provided with a study guide to read. The guide includes learning outcomes, an assessment quiz, a glossary of new terms, the subject content in summary outline, suggested questions for further exploration, & related readings. Once the participants arrive at the seminar it is assumed that they have an introductory knowledge of the subject content.

The seminar model, that is being suggested, includes five basic steps:

1. Induction
2. Seminar learning outcomes
3. Subject content presentation
4. Integration
5. Closing

These will described serially, followed by Other Considerations

1. Stimuli
2. Questioning
3. Reinforcement

in seminar design.

4.10.2.1 INDUCTION

It is generally recommended that a seminar be initiated by a series of inductive activities which will bring the learner to a willingness to engage in a learning experience. The inductive segment of the seminar usually ends with an introduction to the content & its correlation to other learning that has taken place.

The SFX model suggests that induction is always motivating, it always starts independent of the theme & brings the learner to the subject matter. Generally, induction is of three types: verbal, experiential & material. Verbal induction can consist of anecdotes, analogs & examples. Experiential induction includes nonsense games, problem exercises, or group forming activities. Material induction includes flip-chart, audiovisuals, or objects, & is oftem compatible with questioning.

Also, the inductive process serves to first form the group, then to revitalize its dynamic qualities at each successive session.

4.10.2.2 SETTING SEMINAR LEARNING OUTCOMES

Once the participants are ready, then an assessment of learning needs & an identification of expected outcomes from the seminar experience must be "contracted" by the group; often this takes the form of setting objectives or goals for the session. It is useful for the facilitator to be familiar with the cognitive, affective & pyscho-motor domain vocabulary, in order to help the group separate out knowledge, attitude or skill learning & thereby be able to set more operational goals. While the study guide contains certain learning goals, the first step in planning a seminar is the identifying the objectives for that particular session. The UBC manual (1978) suggests that "analyzing these objectives in terms of the specific problems, issues, concepts, attitudes or skills that they might represent will identify the areas of content to be mastered." Once the objectives have been stated, then it is important to order the content & plan the activities.

4.10.2.3 SUBJECT CONTENT PRESENTATION

Usually content follows some logical steps, or might be sequenced from the general to the specific, the concrete to the abstract, the familiar to the unknown, or by alternating interesting & boring topics. Content is usually presented in order to disseminate new information, or to translate, interprete or extrapolate from that information. The seminar design provides for this step to be carried out by an invited resource person, a video tape, a panel of specially prepared participants, or some other approach that ensures an encapsulating presentation.

4.10.2.4 INTEGRATION

Once the content has been disseminated, then the facilitator introduces integration activities to the seminar. Generally, this is the time to analyze, synthesize & evaluate issues & possible home applications. UBC (1978) suggests six approaches -- group discussions, buzz groups, case study, questioning, reaction panel & brainstorming -- for applying knowledge; three -- process demonstration, practice, return demonstration -- for acquiring a skill; &, three -- role playing, audio-visual material, modelling -- for modifying attitudes.

The premise underlying Integration is making new information applicable to the learners' own work situation. Every effort should be made to ensure that the approaches used in this segment are meaningful to the learners.

4.10.2.5 CLOSING

A subject-centered seminar, should be closed with three events: the participants commitment to attempt to apply the learning to a back-home situation, the participants' evaluation of the learning experience, & their evaluation of the process. In the case of the latter two it is incumbent upon the facilitator to encourage suggestions for improvement of subsequent seminars.

ADDITIONAL CONSIDERATIONS

There are three additional considerations in the planning of a seminar. These are variations of stimuli, the use of reinforcement, and problems with punishment and extinction. The facilitator has various tools at hand with which to enhance the dynamic quality of the learning experience.

4.10.2.6 Stimuli

The most evident, & frequently used, is the verbal stimulus of focussing attention on a particular point or issue. Within the context of interaction the facilitator can shift the discussion around the group and around the topic through questions, gestures, movement & silence. Another effective stimulus is a change in the senses, for example from oral/aural to visual.

4.10.2.7 Questioning

Perhaps the most effective stimulus is the use of questioning. Their are two classes of questions: closed questions and open questions. Closed questions are concrete & specific and generally permit only one acceptable answer. They are characterized as being essentially convergent. Open questions permit a variety of possible answers. They stimulate thought and encourage originality & creativity. They are appropriate to motivate the learner or to guide him/her into new considerations of a particular subject. They are characterized as being divergent. On the other hand, closed questions tend to verify information or previously developed ideas, while open questions tend to encourage original thinking and new syntheses. Both are appropriate and can be used in concert.

The three types of questions are for probing for greater expression of meaning; for reaffirming concepts; for varying the stimulus. Finally, questions can be asked directly or indirectly. In the former case, a specific learner is asked to consider the question & respond; in the latter, the group is asked to consider the question & one or two people are expected to respond.

4.10.2.8 Reinforcement

The other consideration of major importance to the facilitator of a group of learners (and to the learners in their mutual support) is reinforcement. The facilitator is constantly emitting reinforcing signals to the learners in the group. These signals are primarily non-verbal, and occasionally verbal. In either case, they are mechanisms which operate in a group learning environment to increase the frequency of a particular behavior. Positive reinforcement can be considered all the stimuli added to an environment which increases the probability that the particular behavior is repeated in an enhanced form. Negative reinforcement is all the stimulus that when it is removed from the environment increases the probability that the particular behavior is repeated in an enhanced form. Reinforcement must be analyzed in terms of the receiver and not of the sender. Also, reinforcement follows an action, and then is repeated on a schedule or intermittenly.

4.10.2.9 Punishment & Extinction

Conversely, mechanisms that operate in a facilitated group to diminish the frequency of a particular behavior are punishment & extinction. A facilitator's verbal and body languages are effective instruments for punishment; while punishment has been proven to be somewhat ineffective as a means of facilitating learning, it is very effective in distroying dynamic group process. Facilitators are often unaware of the punishing messages they might be sending. Extinction is a different method of eliminating a particular behavior, and it is carried out by witholding reinforcements.

This summary discussion of facilitation & the seminar process has been presented as an introduction to the field. By outlining the basic points, in this handbook, you are informed of the premises underlying your workshop experience. You are encouraged to read widely, and try to integrate your own experiences with the topic just presented.

4.11 THE ORGANIZATIONAL ELEMENTS MODEL

Five related elements may be used to describe any organizatio and its nesting in society. These are:

1. Outcomes - The results of any organization have impact in society. The impact of any organization's outputs are the outcomes, seen within a societal context. They represent the ultimate results of an organization external to that organization.
2. Outputs - The results which an organization aggregates and delivers to society are called outputs - organizational results and contributions - are all examples of outputs.
3. Products - These are enroute results which an organization produces. The aggregation of these internal-to-the- organization results are termed outputs. Products are results achieved within an organization.
   [Products, by the way, are the usual domain of the performance and instruction professional. If you are a training developer, another kind of product would be a validated self-instructional program, a performance package which works, a job aid which is demonstrated to change performance, an organizational development program which has predictable changed behavior and attitudes. Instructional designers are usually concerned (preoccupied) with these kinds of results, and often little or no formal attention is made between this level of results (products) and the other super-ordinate results of outputs and outcomes. Thus most professionals do not go beyond the consideration of performance and instruction - and, therefore, only operate at the product level.]
4. Processes - These are how-to-do-its of our intended or existing organizational interventions. These include such possible methods-means as instructional design and development, organizational development sessions, production lines, training classes, televising, mediating instruction. These are the ways in which we go about producing products. Processes are means not ends.
5. Inputs - Inputs are the ingredients and starting places for efforts within an organization, and they include "raw materials" (such as trainers, teachers, learners, money, facilities, equipment, goals, objectives, needs.) Whatever we do, we do it with inputs.

Thus there are three kinds of results: products, outputs and outcomes. Two of these results are "internal" and are termed "organizational results". Inputs and processes represent organizational efforts.

5. ASSESSMENT, APPRAISAL AND EVALUATION

5.1 LEARNING OUTCOMES

After you have read this summary & reflected on related past experiences, you will be able to:

1. define the basic concepts,

2. articulate the relationship between the concepts and your own experience,

3. initiate an analysis of learning evaluation with reference to the vocabulary and concepts presented,

to your own, and any significant other's satisfaction.

5.2 INTRODUCTION

In recent years achievement has become the dominant component of program planning. Not only is it important, for an adult educator, to have observable and measureable outcomes from the learning experience, but current thinking emphasizes the importance of appraising every step in the learning process, in order to ensure that .

1. the learner is aware of his/her learning progress
2. the program is adapting to the evolving needs of the learner.

These notes will examine the various aspects of the judgement process of human learning.

> We are going to enter the 1980s with a thorough, comprehensive understanding of evaluation as a complex, multi-dimensional, purposive activity. For a long time that assertion was in doubt. We have been warring camps, trying to prove that evaluation does or doesn't exist or that it has this but not that form. But we now have a critical mass of people working on the explication of evaluation, people who either have thrown off the yoke of research (especially experimentation) or who have never been encumbered by it. Some of these people are focused holistically, others particularistically. And their merger seems to be close. It no longer seems wildly optimistic to predict that work currently underway will merge by the start of the next decade [before] to give us the conceptual & methodological clarity that has been so elusive.
>
> Evaluation's complexity is further magnified by a longstanding confusion about systematic problem

5.9.6.3 Records
5.9.6.4 Work Samples

> solving strategies (note the plural). Too many of us for too long have believed that there is one systematic problem solving strategy, the scientific method. That is both right & wrong. If we talk (or think) in very abstract terms we can easily differentiate several systematic problem solving strategies - research, evaluation, & development - each of which is particularly effective with a class or category of problems. Research problems exist when we have an intention to know something in a theoretical or generalizable sense AND that knowing is blocked because: 1) no one has ever systematically investigated the thing we want to know, or 2) the investigations that have been done are inconclusive or contradictory. Development (or design) problems exist when we have a task to perform AND the tools or procedures for doing the task at the level demanded do not exist. Evaluation problems exist when we have a decision to make AND we don't know the relative worth of the options inherent in the decision. These three subdivisions of the scientific method are easy to see in a logical analysis. However, the division is not so clear in any real-world problem solving effort, for in the real world evaluation, research, & development problems are usually nested in one another. (Gephart, 1980)

[Talk presented at ACSHRD-HFX, June 1980]

Now why am I so concerned with our intervention into other people's lives ? As adult educators, trainers, human resources development coordinators, or whatever our title may be, we the people in this room have been entrusted with a major responsibility in the career choice, advancement and transition of countless humdreds of individuals that are involved in learning. Decisions which lead to success or failure in the workplace are increasingly becoming our responsibility.

In the 1960s we began improving our ability to evaluate human performance, and our profession became greatly enhanced as be began learning to use valid and reliable measures to determine whether or not learning had indeed taken place. In the process of taking guesswork out of evaluation, we also began emphasizing performance criteria as the centrepeice of evaluative measurement. Underlying this work was our sense of justice with the learners under our responsibility. Indeed learners began responding as never before, because they, at last, knew the rules of our game.

As our profession entered into the decade of the 1970s, we began recognizing that it wasn't sufficient to evaluate only after a learning experience had taken place, but some proceedure was needed to focus a given training program on the particular needs of the individual. Again our concern for fairness with people's careers prompted us to develop techniques and tools which would help us pinpoint individual learning needs. Accuracy in diagnozing learning needs enabled us to design more appropriate curricula; this further enhanced the effectiveness of our work and the success of the learner.

Come the eighties and we have returned to a long standing concern: that of periodic intervention in the learning process. We have found, once again, that as professionals we are called upon to provide feedback to the learner during the training period, as well as when s/he returns to the workplace to perform the particular skills, exhibit the attitudes developed, and discuss the knowledge acquired. Known as shaping reinforcement years ago, appraisal today has become an integral part of our professional responsibility as we seek to enable the individual to learn continuously. Again, we are expected to make fair judgements as to the learner's development as s/he proceeds through a continuous learning experience. Appraising human performance is not only based upon the assessing of learning needs, the setting of achievable objectives and the selecting of appropriate evaluative criteria, but also upon the individual's particular learning style.

Assessment, appraisal, evaluation; three words which represent the most difficult tasks that we as professionals must attend. One mistaken judgement derived from invalid or unreliable information before, during or after the learning experience, and we may very well jeapodize the career of an innocent human being. This continuum of justice -- of fairness -- in our dealings with individuals entrusted to us is of crucial concern. Perhaps by examining the meaning of these words we can focus on what I've been trying to say. "To assess" originally meant "to sit beside" a judge or other person in authority, and provide technical or specialized information on a person, place or thing. Eventually, assessing came to mean "to estimate the value" of someone, someplace, or something. Similarly, "to evaluate" means "to ascertain the value" of someone or something. Consequently, the two words differ only by the degree of certainty of the estimate. On the other hand, "to appraise" derives its meaning from "appropriately praising", that is appropriately stating the worth of someone or thing. The three words suggest a qualitative rather than quantitative judgement. Qualitative judgements which, more often than not, are the deciding factor in someone's success.

So important is this aspect of Human Resource Development work that it has become the most sensitive of all to the human learning enterprise. Indeed the locus of control over the entire judgemental area is being claimed by the learner, in part, because of the lingering uncertainty as to our competency. The current movement of self - directed learning is based upon the premise that the preliminary assessment, the periodic appraisal and the ultimate evaluation ought to reside with the learner.

What does this all mean to us ? It means simply that we must try harder to enhance our competencies as human resource development professionals. It means when we make judgements as to the need or the relative degree of success of a person it is critical that we use criteria and instruments which measure precisely and consistently whatever it is we wish to measure, so that our judgements are reliable. Similarly, it is important for us to secure valid information before we make a decision.

Now let's look at some of the available techniques and tools which we might use to improve our competency.

It is now generally accepted that we must involve the supervisor, the learner, and key consultants in a participatory process from start to finish if we hope to be at all successful. If the immediate supervisor does not identify with the learning needs of his/her subordinate, then no matter how apparently successful the training program is, the subsequent on-the-job application will not be realized; similarly, if the learner does not consider that her/his particular needs are going to be met through the piece, then there will only be symbolic gestures and very little permanent actualization of what has been taught.

The information gathering techniques available to us to be able to assess, appraise and evaluate human performance either tend towards being more subjective than objective or viceversa, and this is a limitation that we must be cautious of.

Observation, with a performance check-list, is useful as a low-cost, quick way of gathering data. It is often used in such events as diving, gymnastics and skating contests where performance alone isn't a sufficient accomplishment, but importance is also given to style and grace.

The interview is one of the most common of techniques we use to carry out our work. It is effective when it is structured to ensure that the inquiry has both depth and breath. When using this information gathering technique it is important to interview not only the learner but also carefully selected key consultants, in order to maintain a balance in the data. To ensure a greater degree of objectivity it is imperative to include in the proceedure a review of the learner's records, reports and a work sample.

A tool that is more time efficient than the interview, but includes many of the same characteristics is the questionaire. The open-ended questionaire can be used to identify the boundaries of the learning problem; the specific questionaire is an important tool for identifying cognitive as well as affective learning. The pre/post test proceedure is perhaps its most conventional use.

Group sessions are another effective means for establishing a concensus of information. Brainstorming, Nominal Group, DACUM/STEP, and DELPHI being some of the numerous techniques available to HRD professionals The various approaches have been designed to evoke a uniform participation by the members in the group process as well as ensure a greater degree of validity in the resulting information.

It should be pointed out that all the methods mentioned thus far are to a greater or lesser degree, subjective perceptions of reality. This is a limitation that we must be cautious of.

Recently the computer, close-circuit television and similation technology have begun to take their place along side of the more traditional approaches. This introduction of media has afforded the professional a greater degree of objectivity in the information collection process. Having the learner perform a given activity and then view him/herself on the screen is effective. An enhancement is to view modelled behavior, then compare it to one's own on a split screen; it is a facile way to establish standards. The Critical Incident and the Micro-segment are important variations in this use of video. More recently the introduction of the video-disc is permitting us a much higher degree of accuracy in identifying the behavioral skill and rudiments.

The simulated environment, though expensive, is one of the most promising new technique available to the HRD professional. Using the computer and television to enhance the environment a learner is afforded a realistic opportunity to test his/her own knowledge and skill against an expected quality of performance. It also allows for attitudinal learning to be include.

As we begin introducing innovative techniques into our work as assessors, appraisors and evaluators of performance, it is important for us to be mindful of our continuing responsibility overall for the decisions being made through the processes. We are the professionals. We cannot abdicate to a machine, or a tool, or a technique, or a person our ultimate responsibility for securing the most accurate of information which will lead to the most appropriate decision in favor of the learner.

5.2.1 PROCESS

A plea is made for non-formal educators to look at achievement in a comprehensive manner.

Evaluation is both purpose & means. There is a need always to judge the worthwhileness of establishing goals both before and after their achievement. He states also that evaluation, both summative and formative, are the means taken to achieve goals. (Scriven, 1972)

The appraising of an achievement itself is an integral part of learning and "principles derived from reflecting and conceptualizing from your own experience, when thoughtfully and responsibly developed and tested, is legitimate knowledge." (Griffin, 1978)

It is important to account for the achievements of a program which are in addition to its official goals.

Consider evaluation as a response to perceived need also, process is critical to successful outcome. (Grotelueschen,1976) (Weiss,) A systems model is conducive to making achievement an integral part of the whole program. (Weiss,)

Achievement is an element in a systems approach to learning (Silvern, 1975).

> There is a need for a model of evaluation of social development programs distinct from the classic research model. The system model is concerned with the degree of which organization goals are reached under a specific set of conditions, with the focus on optimum distribution of resources. The focus on one specific goal tends to divert attention from other goals and leads inevitably, it is thought, to problems of competition and coordination. Goal attainment is not the only concern for judging which find also include recruiting new resources, maintaining the structure and integrating the environment. (Carter, 1973).

The formulation of key questions as the starting point in any useful evaluation (Knowles,1973).

The evaluation data gathered each time a particular behavior is practised serves as a basis for:

1. modifying one's way of performing that behavior the next time;
2. comparing the difference between one's performance over several attempts to practise the behavior.

The evaluation results serve as a solid foundation to the initiation of another learning experience.

5.2.2 PARTICIPANT INVOLVEMENT

The process of evaluation is an essential feature of any program. It requires each learner to specify the expected change in his/her behavior resulting from selected learning experiences. It requires the establishment of indicators (criteria) of the expected change, a system for measuring change (instrument), and a standard for judging the extent (level) of change. Each time the learner practises a specified behavior, he/she has an opportunity to evaluate performance.

Two important role classifications for educational evaluation - Formative and Summative. The formative evaluator gathers information and judges the merits of aspects of an instructional sequence in order to make the sequence better. The summative evaluator gathers information and judges the merits of an overall instructional sequence so that decisions can be made regarding whether to retain or adopt the sequence (Scriven, 1967).

Several authors dwell on the importance in Adult Education of considering participant satisfaction. This satisfaction may be related to the accomplishment of stated objectives, or it may be that participants have achieved other 'unstated' objectives or, perhaps, personal goals. These may be a valuable aspect of the program. (Steele, 1973; Knowles, 1973).

5.2.3 THE PROFESSIONAL TRAINER'S ROLE IN SELF-DIRECTED LEARNING

[published in Atlantic Training Notes]

Current wisdom in adult education suggests the importance of involving the learner in developing (planning, implementing & evaluating) her/his own program of study. The learning adult is considered to be more able than anyone else in identifying what it is that s/he needs to learn, and once identified is more highly motivated to carry out a particular learning experience, if s/he is in apparent control.

Such a theoretical model has been advocated by adult education's contemporary gurus: Knowles, Tough, Rogers, Faure, Friere, Boschard, Ausubel and Maslow, to name a few.

While trainers (human resources developers, teachers, adult educators) enthusiasm for the self-direction of adult learners is whetted by the apparent initial successes (glowing reports about how everyone seems more involved, more motivated, more "responsible"), soon the the person who is infact responsible, e.g. the trainer, begins to have misgivings as to the actual change in the learners' knowledge and skill as the result of the self-directed experience. To be sure there was a change in attitude, but often only minimal change in performance. The professional trainer is ultimately held responsible for the adult's learning experience, or lack of it by the employer who sent the person and expects improved performance when the individual returns to the work place; and, after all the fun and games, by the adult learner who expects to improve her/his performance, and get that raise s/he wants.

When this expected improvement is unattained as the result of the self-directed learning experience, then the obvious temptation is to reject the methodology as not being particularly appropriate in meeting employees training needs. Such is unfortunate, because the self-directed approach, when coupled with professional trainer-managed assessment, appraisal and evaluation techniques, is a very useful (and democratic) approach to learning.

While adult learners are often able to manage their rate and style of learning, they needed assistance in accurately asssessing what it is they specifically need to learn, they need assistance in appraising how well they are doing in the process of learning, and ultimately they need assistance in evaluating if they learned anything afterall. It takes the skills of the professional trainer to provide the valid and reliable information the learner requires to make appropriate decisions throughout the course of the learning experience. Inappropriate information provided to the learner leads to unimportant learning.

Assessment, appraisal, evaluation; three words which represent the most important tasks of the professional trainer.

Until recently the techniques and tools available to the professional trainer to carry out these information gathering and feedback proceedures have been limited to observation, tests, questionaire and interview; all of which are highly subjective. The introduction of technology -- the computer, close-circuit television and similation technology -- have permitted a greater degree of objectivity, and have afforded the learner with more appropriate information.

Having the learner perform a given activity, and then view him/herself on the screen is effective. An enhancement is to view modelled behavior, then compare it to one's own on a split screen; this is a facile way to establish standards. The Critical Incident and the Micro-segment are important variations of this use of video. More recently the introduction of the video-disc is permitting us a much higher degree of accuracy in identifying the behavioral skill and rudiments in the learning.

The simulated environment, though expensive, is one of the most promising new techniques available to professional trainers. Using the computer and television to enhance the environment, the learner is given a realistic opportunity to test his/her own knowledge and skill against an expected quality of performance. It also allows for attitudinal learning.

The professional should look upon self-directed learning as useful strategy for enhancing the motivation of the adult, but one that requires a careful monitoring of the assessment, appraisal and evaluation proceedures in order to ensure that learning indeed takes place.

5.3 ASSESSMENT OF LEARNING NEEDS

The purpose of this section is to introduce to the concept of needs assessment as it exist within the context of the field of Adult Education. Needs are numerous and varied as are the techniques used to assess them. Practicing adult educators will encounter individuals or groups who have educational needs. It is essential to the design of educational activities that the designer have knowledge of the needs of those people who will be participating in the educational experience. With this in mind; the material is presented to discuss needs, the assessment of needs, a brief view of various techniques of assessment and finally an actual experience of assessment. The material is not intended to be comprehensive, rather introductory in nature. As you enter your experience in Adult Education this may be your initial exposure to the concept but certainly not your last.

The apprising of learning needs & their translation into verifiable learning outcomes is very difficult to achieve.

There are three tasks in a needs assessment:

1. Learning groups indicate where they would like to be;
2. Then they describe where they are; and
3. Finally they state objectives to bring themselves from where they perceive they are to where they think they want to be.

Methods of diagnosing or assessing learning needs vary, especially since one may be focussing on communities as well as individuals. Statements of leaders in the field are important, as are the judgments of key persons. When one endeavours to be more systematic, various techniques may be employed (Costello,1979).

5.3.1 DEFINITION OF ASSESSMENT

> A means of gathering, recording or analyzing data concerning the needs of people or settings within a particular range of possible needs such as learning, economic, social or cultural needs; used to assess the suitability of a particular program for a certain context; the basis for stating the objectives of a program.

As mentioned previously, needs are many are varied. Some needs are immediately identified and articulated while others tend to be more subtle, less easily articulated or even subconscious in nature. A need may be defined as

> A condition or situation in which something necessary or desirable is required or wanted. (It is) OFTEN used to express the deficiencies of an individual or some category of people either generally or in some set of circumstances!

There exists no universal definition of "need" which is appropriate to every situation. Rather need tends to be defined in light of components of various definitions as it seems appropriate to the real life situation in which they exist. when thinking of educational needs they would be easily illustrated by the following:
WHAT IS -------"Gap" NEEDS-----what ought to be? (From the learner's viewpoint). (Monette, 1979).

An effective program of Adult Education should consider the needs and related interests of the adult learner, and attempt to discover and meet his real needs as well as the needs of his social order (Bergevin,1967).

Individual learning needs are the gap between their present level of competency and the required level. This gap can be one as perceived by the individual, by his organization (or institution), or by society (Knowles,1970).

A learning need is "the discrepancy between the current status of a person or program and the desired goal for that person or program". The Delphi Technique is one of the the least directive method for assessing the needs of learners. It allows for the widest possible range of response (Grotelueschen,1976).

Learning depends on the recognition of the status and needs of the individual who chooses to learn, and consequently is invoked by capitalizing upon desires to gain information which will ultimately change behaviors (Broschard,1977).

A need may also fall into two separate categories:

1. felt need
2. ascribed need.

A felt need is one that is identified by a person through his/her own power of self perception, whereas an ascribed need is one that is identified by an observer. The conducting of a needs assessment takes into account both types of needs. The Adult Educator in the process of designing programs is concerned with ascertaining what the individual perceives are his/her own felt needs relevant to a particular subject area as well as the asscribed needs as defined by the adult educator and relevant others.

The facilitator of adult learning is challenged to helping people plan for themselves. Prior to the initiation of any program, a study of needs & interests should be conducted and then a continuous feedback of needs from the learner is a necessity (Rauch,1972).

Accurate diagnosis of needs is crucial to the success of any learning program.

> If there is a determination to serve those individuals and social groups in most pressing need, then no alternative remains but to set out on the long, hard road of methodological inquiry. (Lowe, 1975)

Learning takes place in our culture where the individual is responsible for his own actions (Broschard, 1977).

There is a remarkable similarity between Tyler's Curricular Rationale and Knowles' Needs translated into objectives particularly when examining the sources: students, society, and subject (Tyler) and individual, community and organizational (Knowles).

5.3.3 NEEDS ASSESMENT MODELS: A Comparison

People have many concerns which are not supported by facts and, hence, are not "needs." The "assessment" part of needs assessment is the process of collecting the data to change an expressed concern into a validated need. These expressed concern are then rated or ranked according to pre-determined criteria. To them, a "concern" is a hypothesis or belief that there is a difference between existing and desired conditions. It is through the needs assessment process that this hypothesis is validated or refuted (Price ET AL., 1977).

The term is used to designate a process for identifying and measuring gaps between WHAT IS and WHAT OUGHT TO BE, prioritizing the gaps, and determining which of the gaps to work on to obtain closure. To many people, needs assessment and evaluation are very similar terms; in fact, some people use them synonymously. Although the two concepts are very alike, one of the biggest differences is the time element. Since needs assessment looks at "what is" and compares it to "what should be," it is looking from the present to the future. Evaluation looks from the present to the past as it asks "what has been the impact" of a given program or product on student learning, or "what was done" and "what was expected to be done" and "what was expected to be done" (Witking, 1975).

Needs assessment, is a formal process for determining gaps between present and desired outcomes. Needs data can be collected by standardized tests, criterion-referenced tests, observations (direct and/or unobtrusive), interviews, Delphi techniques, critical incidents, census data, employment data, and polls. In addition, he suggests that the needs assessment data be summarized, emphasizing that the data must come from three partners-learners, educators, and the com- munity-and not be based simply on how the assessor "sees it" (Kaufman, 1975).

A needs assessment model that is similar in many respects to Kaufman's is Coffing's Client Need Assessment Model. Although more similar than dissimilar, the models do differ in that Coffing puts more emphasis on decision- making, whereas Kaufman emphasizes problem-solving (Which, of course, eventually involves making decisions-but his emphasis is not as much on this aspect). Coffing also puts much more emphasis on the client's perception of needs, rather than the assessor's perception.

Lee is interested in the client, as "an important principle in human systems is that those who receive from the system should participate in determining what those services should be" (Lee, 1973). Also, he is concerned with decision-making.

"Traditional practice appears to be the major criterion for decision-making (which demonstrates) . . . a need for assessing the relationship of changed inputs to organizational outputs . . . (Thus, he feels that) the basic purpose of assessing educational needs of students is to provide a data or information base for educational decision-making" (Lee, 1973).

There are several differences between the problem-solving approach suggested in this model and the more usual approach to dealing with problems in educational systems. There is an attempt to shift many of the emphases of the traditional school management model. The approach to problems in this model is from the educational needs of the students, not from the maintenance needs of the evaluation system. Rather than attempting to avoid problem recognition, an attempt is made to seek out problems and resolve them before they become significant or of crisis proportions. Monitoring devices should be planned into the system to identify problems at the earliest possible opportunity" (Lee, 1973).

Lee emphasis on the affective, as well as the cognitive, aspects of education, suggesting that objectives should be developed for both domains.

Harless' Front-End Analysis Model is a deficiency model, which would imply something incomplete, insufficient, or lacking an essential element, he turns around and defines deficiency as "the difference between the actual situation and a model situation" (Harless, 1975), which makes it more a discrepancy than a deficiency. Harless talks about problems instead of needs, and yet his definition for problems is very similar to Kaufman's definition for needs. For a given performance deficiency there are only three categories of remedies:

1. training
2. reengineering of the environment
3. incentive manipulation (Harless, 1975).

Harless is concerned with decision-making and goes into it in great depth as it relates to performance problems. He recommends drawing up a

matrix to assist in the decision- making:
1. List the ALTERNATIVES and ASSUMPTIONS.
2. Determine the FACTORS to be considered in assigning priorities, based on the nature of the organization, the subject matter, and the student population.
3. Determine a VALUE SCALE for each FACTOR.
4. Determine a WEIGHT for each FACTOR.
5. For each PROBLEM, select a FACTOR VALUE from the value scale.
6. Multiply the FACTOR VALUE times the WEIGHT of the factor.
7. Repeat steps 5 and 6 for each factor and all problems. (Trimby, 1980)

Needs Assessment Comparison Matrix

Definition: (of needs assessment)

(Kaufman)
A formal process for determining gaps between present outcomes and desired outcomes; for getting all perspectives put into the setting of goals and objectives.

(Coffing)
The process of gathering information about people's needs relative to a particular school setting.

(Lee)
A process by which the unfulfilled educational requirements of a population of students are identified. It is a means of determining the educational objectives most appropriate for a particular situation.

(Harless)
A systematic method for determining solution alternatives for problems. (All the smart things a manager, trainer, or consultant does BEFORE adressing a solution to a human performance problem.)

Performance Directives:

(Kaufman)
Assesses gaps in measureable performance terms.

(Coffing)
Stresses the cognitive definition of needs.

(Lee)
System must be organic, viable, and responsible; must have means for constantly and accurately assessing the changes in the needs of its students.

(Harless)
Analyzes and generates solutions for human performance problems.

Definition of "Needs":

(Kaufman)
Needs: gap between current results & desired results.

(Coffing)
Needs: aspects of people's mental experiences, a

cognitive concept of "what should be."

(Lee)
Educational needs: discrepancy between two states of affairs (what is desired or should be, and what now exists, or is being accomplished).

(Harless)
Problems: how some actual situation deviates from a model situation.

Components: (or roles)

(Kaufman)
Learners, educators, and the community.

(Coffing)
Clients (may be students, parents, teachers, future employers of present students, etc.).

(Lee)
Students, staff, public served by the system, experts in the field, and authorities on the requirements of the future.

(Harless)
Managers, supervisors, and training personnel.

Concerned with:

(Kaufman)
Ends (or whats; products) NOT means (or hows; process

(Coffing)
Gaps that exist between clients' specified needs and the status of their need fulfillment.

(Lee)
Compares what is desired, or should be with what now exists, or is being accomplished.

(Harless)
Problem-solving so that the CAUSES of problems can be eliminated, or the EFFECTS of the problems minimized.

Emphasizes:

(Kaufman)
Problem-solving.

(Coffing)
Making decisions.

(Lee)
Making decisions. Problem-solving. Accountability for results.

(Harless)
Problem-solving. Making decisions.

Application: (Used for)

(Kaufman)
Responsible change; improving the effectiveness of educational planning; designing curriculum; reduce conflict and increase cooperation among partners; identifying problems to be solved.

(Coffing)
Initiating educational change; program planning, implement control, and evaluation; Making decisions.

(Lee)
Assessing the relationship of changed inputs to organizational outputs; planning and development; assess quality of performance of a system; to satisfy educational needs (through successive approximations); making decisions.

(Harless)
Analysis and solution of human performance problems; decision-making, based on cost/benefit analysis; background for managing by objectives.

Steps or Stages:

(Kaufman)
1. Commit to planning.
2. Identify partners.
3. Select partners.
4. Select data collection methods and means.
5. Let someone else do Public Relations.
6. Pilot-test the data collection methods and means.
7. Collect the needs data (including external data on survival).
8. Re-cast in outcome gap terms, if necessary.
9. Determine the agreed-upon gaps.
10. Determine and reconcile disagreements.
11. Rank order the needs.
12. Select the needs for closure.

(Coffing)
1. Prepare to do client need assessment.
2. Focus the effort.
3. Identify the clients, needs, and definers.
4. Define the needs.

5. Measure the status of the needs.
6. Evaluate the utility of the information.

(Lee)
Phase I: Identify desired educational outcomes for educational system.
Phase II: Assess the degree to which students are achieving the desired outcomes.
Phase III: Initiate problem-solving to meet needs.

(Harless)
1. Define and describe the problem.
2. Hypothesize causes.
3. Test each hypothesis (compare "good job").
4. Determine solution alternatives.
5. Weigh the costs and effects of each alternative.

Relation to Evaluation:

(Kaufman)
Descusses three of Scriven's types of evaluation:
FORMATIVE: to determine enroute success (or failure); if our processes are working and what to change.
SUMMATIVE: to determine if you get to your goal (or not); if our products (or outcomes) were achieved and if not, which of them will require further attention.
GOAL FREE: determines unexpected results-of both process and product. What happened that we didn't plan in both means and ends?

(Coffing)
Background preparation in evaluation measurement or survey research is helpful in carrying out role of needs assessor. Criteria: efficiency, completeness, and focus.

(Lee)
A basic component of this assessment model is the translation of broad educational goals into specific criteria which may serve as a basis for subsequent evaluation. In fact, the entire second phase of the model is devoted to evaluation, as this phase measures the important and significant performance objetives (both affective and cognitive) and criteria established in Phase I. Model is based upon objective and systematic evaluation and places an emphasis upon experimentation and planned change.

(Harless)
Discussed in terms of the weighing of possible alternatives (evaluating which would be best according to cost, benefits, or time). Effectiveness compared to objectives; costs (with ALL costs considered) versus

some other alternatives.

Categories:

(Kaufman)
Collect Facts:
1. Objective.
2. Subjective
3. Projective.

(Coffing)
Roles:
1. Clients.
2. Decision-makers.
3. Needs assessor.

(Lee)
Two categories of decision-making, based upon:
1. Antecedents.
2. Consequences.

(Harless)
Divides causes of problems into three categories:
1. Skill/knowledge.
2. Environmental.
3. Motivation-incentive.

Basic Goal:

(Kaufman)
Basic human survival in the external world.

(Coffing)
Fulfilling those needs which are not being fully met now by school programs.

(Lee)
To provide sensing and monitoring data as feedback within a system that is constantly changing.

(Harless)
Build a general model for the specification, analysis, and design of solutions for classic performance problems.

5.3.4 SELF ASSESSMENT AS AN ADULT EDUCATOR

The final part of this section dealing with Needs Assessment turns to the individual Adult Educator. As well as assessing the needs of others, the Adult Educator should be adept at assessing his/her own learning needs for continued growth. Since you are now in the process of initiating a new learning experience for yourself in the field of Adult Education, a self inventory relative to the field would seem appropriate at this point.

The many competencies suggested by Knowles (1970), Ehrenberg (1974), and Burrichter (1977) present to the adult educator an array of possibilities. It becomes clear that considerable discretion needs to be exercised in selecting the appropriate elements to a learning program. It is important to make a careful selection of a core of applicable competencies in the field where the learning is to take place (Tyler,1950; Knowles,1970). It is further important to introduce a system showing required functions and a breakdown of the competencies relevant to the performance of each of these functions (Knowles,1979). A variation is to use a system that included 'essential' and 'relevant' competencies (Burrichter,1977; Ehrenberg,1974).

It is recommended that the adult educator examine the Self-Assessment Inventory which was designed by Adult Educators at Florida Atlantic University to meet competency criteria by state educational authorities. [See also Teacher Competencies; 3.4.4] Its purpose, objectives and directions are clearly stated. You are invited to use this inventory, not as a measure, but rather as a tool to broaden your perception of the skills involved in Adult Education and how they relate to you. This is an individual exercise but dialogue between respondents may be most beneficial.

5.4 APPRAISAL

The facilitator makes the key decisions in determining the success of adult students, as he is responsible for building a positive environment (Rouecke,1976).

There comes a time when the group facilitator wants to know "how the group is doing".

There also comes a time when each group member wants to know "how the group is doing".

At this time it becomes necessary to appraise the group progress. Generally when it comes to assessment or evaluation people become:

1. expert "putter offers" - Yes I know it would be nice to know how we're doing: Look how about next month...

or

2. expert generalizer's, "Oh, I suppose we're doing O.K. What do you guys think - everybody's happy I guess!"

or

3. expert rationalizers, "I know we should probably try to figure out how we're doing but at this point in time it would probably be threatening to some of the group members."

or

4. expert dumb players, "I know I should probably assess the group's progress, but I'm not really sure how to go about it."

The end result of this is that appraisal gets talked about alot but very seldom does it ever get done.

So Why bother.

Well There are lots of good reasons why we should appraise a group development.

A few are:

1. It provides the group with "a picture" of their development - "This is what we've done."

2. It provides the group with motivation to move in on "Gee if we've come this far we might as well continue."
3. It provides a review of what has been happening in the workshop "When we began we said we wanted to do this. This is what we've done."
4. It shows the holes in group progress. "Didn't we talk about that at all? I guess we must have forgotten about it."
5. It helps in planning future group work. "Next time we should do this and maybe later we can fill that hole."
6. It makes groups more effective. "If we had done this instead of that we would probably have had more effect."
7. It shows us duplications and time wasted. "We did that twice."
8. It tells us what kind of effect the experience is having on the group and the individuals involved. "You know as a result of the two meetings I attended last month I really feel better about myself and the way I deal with other people."

So when should we get involved in judging of group progress

Well

There are three times:
1. At the very beginning - from the very first planning needs assessment meeting the group should try to decide what kind of appraisal strategy they will use to determine their progress.
2. After each session or couple of sessions a short appraisal should be completed to make sure that things are going to plan or are on target. This will also provide group members with an opportunity to suggest changes in approach or procedure.
3. At the end of a pre-determined interval of time (if the program comes to an end or every three or four months.) An evaluation should be more formal and longer. It should tell the group how close they are to meeting goals, what goals have already been reached, where they should go next, where they have to backtrack to cover things they missed, etc.

O.K. ?

5.4.1 FORMATIVE APPRAISAL

The several following statements on appraisal focus on the importance of periodic checking as to the applicability of the learning taking place:

- Confirmation to the learner that he has modified his behavior is reinforcing;
- Learning manifests itself when an organism modifies it behavior in response to a given stimulus;
- Are discriptions clear enough to discriminate whether it has occured?
- Do elements in the learning situation approximate closely the...job situation?
- To the extent that training stimulus and response cannot simulate the work stimulus and response does the training behavior which will enable the worker to adapt to discrepencies on the job?
- How have the punishing or interfering consequences of the behavior on the job been minimized? (Murphy [cited in Knowles, 1973]).

Formative appraisal is used to improve a learning curriculum during its development, or an appraisal which takes place in an intermediate stage of curriculum development, & to provide intelligent changes to be made in the curriculum. The deficiences are identified & appropriate adjustment made (Tyler, 1967). Appraisal is a difficult task to accomplish when trying to measure multifaceted human learning. At best a facilitator is able only to elicit some subjective responses from the learners about how they feel or what they think as well as some objective measures of behavior change. In order to guard against inappropriately appraisal learning in non-formal settings Argyris (1976) and others suggest that it is the joint responsibility of the facilitator to continuously monitor the learning, by integrating appraisal into the experience itself. It is salutary to have those who must act on the results share in the decisions (Steele, 1973).

Knowles (1970) agrees; he states:

> Many program directors have learned the hard way that it is a mistake to perceive these populations merely as sources of data for the use of others in making an appraisal judgment. It is crucial to their ego involvement and to the validity of the results that they be included also in the process of analysing the data and applying the findings.

Feedback appraisal loops indicate that there is an interaction between the learner and the situation (Belkin, 1977).

Assess the learning situation in formal and informal modes is an important source of feedback for the instructor as well as the learner (Gagne [cited in Dublin, 1973]).

"The product of an effort is directly attributable to the process of attaining it" (Eye,1971).

Formative evaluation [appraisal] has been seen as playing two roles during the implementation stage of an education program:

1. the gathering of interim performance data in order to indicate how closely the program is meeting its objectives & where specific discrepancies lie;
2. the assembling of diagnostic data on the process of program implementation in order to spot & remedy malfunctions.

Yet both run afoul of educational practice, namely that the model & the goals of a program must change in process as the participants gain a clearer idea of real needs & possibilities. (Foster, Easton, 1980)

Successful implementation depends largely on the degree to which a process of "mutual adaptation" has taken place between these programs & the participants learning goals. (Berman,McLaughlin, 1975)

Educational change programs undergo their own metamorphosis in the course of their implementation. (Fullan, Pomfret, 1977) The weight of evidence favors the adaptation approach to evaluation, as it is more likely to ensure effective implementation.

The CIPP model [context, input, process, product form of evaluation] suggests:

> It is noteworthy that structuring decisions can result in the modification of the established objectives. For while objectives are initially based on needs or opportunities & problems, they may be & frequently are modified because realistic limitations on available means to ensure their achievement. (Stufflebeam, 1971)

Goal free formative evaluation concentrates on giving project management a preview of a variety of significant effects of the program not limited to (because not based upon) those specified in the initial or official objectives. (Scriven, 1973)

The goal free evaluator undertakes unilaterally to redo needs assessment & redefine objectives in the light of his perception of current conditions & to begin measuring outcomes in relation to this new & broader set of criteria. (Popham, 1974)

5.4.2 SHAPING REINFORCEMENT

The behaviorist is a systematic observer of what is really going on, the everyday reality which is already conditioned as he describes it. People may be unaware of what they are doing, but conditioning and reconditioning of behavior is going on all the time. "The fundamental mistake...is to assume that their methods (humanists) leave the balance of control to the individual, when in fact they leave it to other conditions" (Skinner, 1971).

The technique of problem-solving is merely that of manipulating a variable which may lead to the emission of a response, then successive approximations are reinforced to shape the operant.

Shaping: a technique by which something is taught outside the normal range of behavior;

> behavior is determined by its consequences; consequences are the real shaper of behavior. Learning does not occur because behavior has been primed (stimulated); it occurs because, behavior, primed or not, is reinforced. (Skinner, 1971)

Two concepts lie at the heart of Skinner's treatment of learning: control (Law of Effect taken seriously) & shaping. (Knowles, 1973).

The task of teaching thus becomes arranging contingencies of reinforcement. (Murphy,).

There are two aspects of reinforcement to be considered:

1. Schedules of Reinforcement:
    - continuous vs intermittent
    - Ratio schedule
    - Interval schedule
    - Fixed vrs variable schedule
2. Contingency Management (a reinforcer is made contingent on a certain behavior)
    - Premack Principle ('65)
    - Contingency Contract
    - Stimulus control, discrimination and extinction

(Gage,1975).

The behaviorists consider that readiness to learn is a learned behavior. Similiarly clues in the environment are essential before responses can be made; consequently the learner is a susceptible operant, respondent to shaping techniques. Consequently, behaviorists proscribe extensive and detailed methods & sequences to develop skills specific specific knowledge (Belkin, 1975).

Reinforcement is the only situational condition in behavior. Reinforcing stimuli serve the purpose of confirming the expectations of the learner in relation to an anticipated goal (Belkin, 1975).

5.4.3 REGIMENS OF INFORMATIVE [APPRAISAL] FEEDBACK

Joseph A. Tucker, Jr.

Quality control of human performance is directly dependent upon the precision, accuracy, and completeness of information a performer can obtain about his actions. Many human performance deficiencies can be traced to inadequate and/or poorly managed [Appraisal] feedback. Proprioceptive feedback is outside the scope of this paper. Though it is involved in all human performance, its significance for behavioral management depends upon the relevance of perceptual-motor quality to adequate task performance.

[Appraisal] Feedback is useful for performance acquisition and improvement, skill maintenance, and motivation. Much feedback can be self-administered. The performer can correct his own behavior, congratulate himself, etc. But, the management of feedback for systematic development and maintenance of prescribed levels of task performance requires regimens of feedback appropriate to a task and/or cluster of tasks. Such regimens may include combinations of objective, subjective, and normative feedback from both task and monitor.

Instructive feedback often can compensate for inadequacies in task feedback. It may be objective or subjective, depending upon information inherent in the task. However, using instructive feedback to impose an objectivity not inherent in a task can be a serious mistake. Evaluation schemes are highly susceptible to this error.

CATEGORIES OF INFORMATIVE FEEDBACK

When performers are aware of the consequences of their behavior they have knowledge of results (KR). KR has been credited with three functions that affect human learning: information, reinforcement and incentive. (Annett, 1969)

There is a distinction between action feedback and learning feedback.

> The latter always refers to KR which comes after the completion of the response such that information cannot be used to control the response being measured but can only be used by the subject for subsequent responses. Action feedback on the other hand is any feedback that arrives and can be used during a response. (Miller, 1953)

Another categorization of KR is implicit in the distinction (Gilbert, 1967) between two aspects of achievement, accomplishment and acquirement.

> Acquirement connotes achievement produced by learning; accomplishment has the added connotation of acquirements that are useful in social intercourse, e.g., 'an accomplished pianist.' Acquirement refers to what the student has learned whereas accomplishement refers to the value we place on what he has learned.

Characteristics of Types of Informative Feedback

DIRECT	INDIRECT
Intrinsic	Extrinsic
Inherent	Monitored
Natural	Instructive
OBJECTIVE	SUBJECTIVE
Clear	Diagnostic
Unequivocal	Consistent
Immediate	Delayed
- Often	
VARIABILITY	VARIABILITY
- Complete	- Complete
- Incomplete	- Incomplete
- Absent	- Absent
ABSOLUTE	NORMATIVE
Definitive	Comparative
Verifiable	Qualitative

Absolute Feedback

Absolute feedback is possible when there is unequivocal, unqualified, conclusive evidence that an objective has been met. The absolute is two dimensional in that the evidence leads to a definite "Yes-No" decision. It implies perfection relevant to the objective and to the specifications upon which the objective is based. It refers to status, an accomplishment, a final judgement. It is not partial or incomplete.

Normative Feedback

Normative feedback is comparative and qualitive. Most human accomplishments are products of a performance for which an upper limit of excellence cannot be set with certainty. Potentially, the best past performance can be excelled. Consequently, an evaluation upon which informative feedback is based references the product of one's repertoire against the product of others or against one's own previous performance. Many variables may be considered in a normative evaluation. In human learning the related variables of time and speed affect the quality of many accomplishments.

Most complex human accomplishments (particularly, those of a social nature) must be evaluated normatively. Status is perceived most often as relative, not absolute. Accomplishments can be dimensionalized into two or more categories. This permits scaling and measurement. Norms in the form of percentages, percentiles, or ranks can be established and used as the basis for an informative feedback that is comparative but not diagnostic.

Objective Feedback

Objective feedback is ascribable to information from performance of the steps of a task as well as from the result of that performance; it refers to acquirements. It refers to that portion of the feedback from a human activity that is factual, impersonal, non-subjective, free from opinion. Most often, it follows immediately upon completion of the step performed. (Gilbert, 1967)

Subjective Feedback

Subjective feedback is jungemental. It is diagnostic, evaluative, interpretative, opinionative. It follows step or total task performance. It can be delayed rather than immediate. Subjective feedback is provided by a monitor or by an appraisal by the performer. As such, its purpose is instructive.

Subjective feedback can complement and augment objective feedback when the latter is partial. In so doing it tends to increase the reliability of task performance. Subjective feedback itself must be relevant and consistent since its intent is to affect acquirements.

Since control of feedback provides much of the basis for claims that there can be quality control of human performance, an educational technologist must have a thorough understanding of the conditions of feedback inherent in a task performance in order to train, evaluate, and control performance of that task. Preoccupation with the reinforcing effects of a response can lead an educational technologist to attend casually to the qualitative adequacy of the information obtained by responding. But an effective regimen must be based on an analysis of the adequacy of task feedback.

Situation-Informative Feedback Relationships

PERFORMANCE	CATEGORY	EXAMPLES
1. Prescribed standards must be met.	Absolute	Assembling machinery
2. Status must be reported	Normative	"worker of the Month" announced
3. Sequence must be followed.	Objective	Data into storage
4. Performance must be appraised	Subjective	Recorded data checked for accuracy

Features of Eight Basic Regimens of Informative Feedback

REGIMEN	FEATURES	EXAMPLES
1. Objective-absolute	Unequivocal no feedback	Jigsaw puzzle
2. Subjective-absolute	Steps must checked; criteria can be specified	Blue print preparation
3. Objective-normative	Steps provide feedback, value of accomplishment is relative	Track meet event
4. Subjective-normative	Subjective review of steps, value estimated by rating	Typical performance appraisal
5. Absolute-normative	System specification set; actual performance	Classroom Objectives as the 90/90 standard
6. Objective-subjective	Objective task feedback is partial Monitoring is needed to complete the info feedback	Income tax preparation
7. Subjective-subjective	Little objective task feedback about steps or results	Political decision making
8. Objective-objective	Not goal directed objectivity is a feature of the steps only	Sleepwalking

5.4.4 NORMATIVE SEQUENCE

The principle of Normative Sequence is as follows:

1. Preliminary synthesis: thru key consultation the researcher assesses the human existential situation: what changes are affecting them, how society assesses these changes, what are the issues, & how relevant; assuming the reality of the community & gaining its confidence;

Systematic observation:
- of primary groups or sub-systems constituting natural units of daily life;
- of sector activities such as work, recreation, worship, etc.;
- of the belief system -- set of norms, patterns of interaction, the total network of forces affecting cohesion & description;
- of the community's "world view" or philosophy of life.

This global view is the matrix from which empirical research orientations might follow.

3. Reflective synthesis: thru a merging of 1 & 2, the researcher must then confront this new systematization & deepen his/her own level of consciousness; diversity is to be encouraged in order to test the critical survival value of each component;
4. Feedback to the populace: the research must resubmit the reflective synthesis to the informants who may accept, reject or modify the reflective synthesis.

This normative process launches a dynamic process of permanent synthesis among values held, values proposed, values newly chosen.

5.5 EVALUATION

5.5.1 DEFINITIONS

Educational evaluation would seem to be the object of almost as many definitions as there are authorities in the field. The essential purposes are: description of educational programs - value judgments - and providing information for decision-makers. (Grotelueschen, 1976)

Many descriptions have confined the process of evaluation to an examination of the extent to which an educational program achieves its objectives; this concept has been endorsed by the Adult Education Association of America since 1952 (Steele, 1973).

Evaluation is for:
- accountability
- ameleoration
- advocacy

Evaluation is simply a process directed to discovering the extent to which a learning experience accomplished what it set out to do. Evaluation is predicated on a specific goal established at the start of the learning program. (Bergevin, 1967).

A more comprehensive concept of evaluation can be considered as a means of gathering, analysing and interpreting evidence systematically on how well an instructional system performs. This view is sufficiently comprehensive to include various measures, from rigorous measurement of the product to an intrinsic study of the interrelationships of the various elements. (Gagne, 1973).

Systematic educational evaluation consists of a formal assessment of the worth of educational phenomena, and can be attributed to many things such as:

> The outcomes of an instructional endeavour, the institutional programs that produced these outcomes, educational products used in educational efforts, and the goals to which educational efforts are addressed (Popham, 1975).

The determination of the extent to which the desired objectives have been attained, or the amount of movement that has been made in the desired direction go on to point out the limiting effect of mere 'objective' assessment and introduce the concept of "ends assessments" (objectives) and "means assessments" (How were the objectives achieved. (Boyle, 1970).

A comprehensive evaluation, for example, would also emphasize such considerations as the correspondence between stated objectives and curriculum content and even an evaluation of the objectives themselves (Zais, 1976).

Combs (1972) endorses this when he poses the crucial question - "Are the objectives to be measured the truly important ones"

For the behaviorist performance of learning in a realistic setting is the only basis for evaluation (Belkin, 1977).

5.5.2 SUMMATIVE EVALUATION

Knowledge about and practice of evaluation in human development programs is a relatively unrefined area of study.

> The distinction made ... between formative appraisal and summative evaluation indicates that each serves substantially different purposes. Formative or process appraisal is ongoing, and serves to refine the program design through frequent communication or feedback. Summative or outcome evaluation provides judgments about the degree to which program objectives have been accomplished. (Carter, 1973)
>
> In addition to a written report, evaluators might set up an oral reporting session where, in news-conference style, evaluators could respond to questions posed by interested parties. Tape-recorded reports, video or audio only, might also be employed. Even sound filmstrips could be used. The more alternative reporting schemes one uses, the more likelihood there will be that the evaluation results will be provided in a fashion so that the decision makers can find one consonant with their preferences (Popham, 1975).

There are some programs and stages in the development of programs in which it is simply not possible to achieve a meaningful "end product" or outcome evaluation

> ...These programs may be in traditionally "difficult" areas, such as attitudinal and value change where outcomes tend to be cumulative over a long period of time
>
> ...Of the multiple objectives often involved, some may be relatively easy to define and measure. Those which are not are often ignored altogether or assessed by weak proxy measures. (Carter, 1973)

While there are supposedly over 40 different attempts at models of evaluation there appear to be only six categories of evaluation:

1. systemic (CCIP, CSE, Descrepancy)
2. scientific (experimental, Metfessel-Michael, domain referenced)
3. legal (adversary-advocate, advocate team, law)
4. clinical with client behavior structuring evaluation (responsive, transactional)
5. clinical with evaluator structuring evaluation (goal free, connoisseurship, illumination)
6. miscellaneous (meta-evaluation, modus operandi)

And there are eight elements to be considered in any of these approaches:

1. Function - what does it accomplish
2. Inputs - what does it consume
3. Outputs - what are inputs converted to
4. Process - how is the conversion done
5. Environment - where does it take place
6. Human agents - what human resources used
7. Physical catalyst - what things used but unchanged
8. Information catalyst - what info used but unchanged (Nadler, 1980)

5.6 CRITERIA

Criteria are the standards or behaviours considered valuable for the participants to obtain, or for the operation of the program to meet. Such criteria are usually specified in the program design (Houle, 1972).

Evidence, criteria and judgments are the essential elements of evaluation.

> Before you can decide on a particular procedure for getting evidence and selecting the best methodology, you have to determine the type of evidence that is required and the degree of accuracy called for in order for the purposes of the evaluation to be met; ultimately evaluation is a thinking rather than a doing process. (Steele, 1973)

5.6.1 NORMATIVE CRITERIA

The judge should have a clear picture of the characteristics of a successful program in order to compare a particular program's outcome with the ideal learning activity. Three main factors about a program should be kept in mind when interpreting results: appropriateness, practicality, and effectiveness. The program should be appropriate both to the institution's goals and the participant's needs. Practicality involves a cost-benefit analysis. Program effectiveness is determined by the extent to which the participants attain their learning objectives.

The element of judgment is the "crucial part of the whole evaluation concept". (Dickinson, 1977)

In how many Adult Education situations is conclusive proof (i.e. from instrumentation-analysis techniques) necessary, appropriate, and possible? (Steele, 1973).

Statistical measurement may sometimes be in order, although many authors are quick to point out that measurement must not be confused with judgement. "Extreme caution and prudence needs to be exercised in drawing inferences from measured data."

> Perhaps the most valid information is acquired when evaluators have developed sound interpersonal relationships with teachers, and teachers' feelings and perceptions are freely and honestly expressed in informal discussions.

And further more that:

> Comparing and contrasting student perceptions with those of teachers and curriculum planners can provide entirely new appreciations of the dynamics of the functioning curriculum. (Zais, 1976)

The concept of a more comprehensive role for evaluation has gradually evolved. While recognising the importance of assessing the degree to which objectives were achieved, the necessity was seen to - among other things - judge the merits of the stated objectives themselves, and the consistency among the various program elements - such as between objectives and learning activities. There are two inherent problems: lack of clarity in the statements of program objectives - changes in objectives - and lack of agreement among various parties about the statement of objectives. Steele goes on to state the fallacy of assuming that, because the objectives were attained, the program was successful. Achieving objectives is worthwhile only if the objectives themselves are valuable. (Steele, 1973)

The point at which program evaluation starts and the point to which it continuously returns is each program's objectives (Knowles, 1970).

Evaluation can also be used for such secondary purposes as defense against attack, justification for expansion, support for the status quo, boosting of morale, personnel appraisal and promotion, and institutional reorganization (Knowles, 1970).

The importance of the transferability (is it dissociable) of the learned information is the ultimat measure of learning (Ausubel,).

See that the information learned is dissociable (Ausubel [cited by Dubin, 1973]).

Behaviorally appropriate learning is the occurance of S and the R at approximately the same time in a situation (contiguous conditioning) and is the only measure required for learning.

Of particular importance to the facilitator is the need to determine whether learning has taken place in three domains: cognitive (Bloom, 1956), affective (Krathwold, 1964), & psychomotor (Simpson, 1972). Being knowledgeable of these taxonomies will assist the facilitator clarify, together with the learners, the expected outcomes of the experience. There is a fourth taxonomy (Stienaker, 1975) which focuses on the whole learning experience. It provides an alternative strategy for setting experiential criteria.

5.6.2 COGNITIVE DOMAIN

Knowledge

Knowledge, as defined here, involves recall or remembering of information.

1. Knowledge of specifics
   Knowledge of terminology
   Knowledge of specific facts
2. Knowledge of ways and means of dealing with specifics
   Knowledge of conventions (characteristic ways of treating and presenting ideas and phenomenons)
   Knowledge of trends and sequences
   Knowledge of classifications and categories
   Knowledge of criteria
   Knowledge of methodology
3. Knowledge of the universals & abstractions in a field

   Knowledge of principles and generalizations
   Knowledge of theories and structures

Comprehension

This represents the lowest level of understanding. It refers to a type of understanding ... such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other material or seeing its fullest implications.

Translation

Comprehension as evidenced by the care and accuracy with which the communication is paraphrased or rendered from one language or form of communication to another. Transition is judged on the basis of faithfulness and accuracy, that is, on the extent to which the material in the original communication is preserved although the form of the communication has been altered.

Interpretation

The explanation or summarization of a communication. Whereas translation involves an objective part-for-part rendering of a communication, interpretation involves a reordering, rearrangement, or new view of the material.

Extrapolation

The extension of trends or tendencies beyond the given dates to determine implications, consequences, corollaries, effects, and so forth which are in accordance with the conditions described in the original communication.

Application

The use of abstractions in particular and concrete situations. The abstractions may be in the form of general ideas, rules of procedures, or generalized methods. The abstractions may also be technical principles, ideas, and theories, which must be remembered and applied.

Analysis

The breakdown of a communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear or the relations between the ideas expressed are made explicit or both. Such analyses are intended to clarify the communication, to indicate how the communication is organized and the way in which it manages to convey its effects, as well as to indicate its basis and arrangement.

1. Analysis of elements
   Identification of the elements included in a communication.

2. Analysis of relationships
   Identification of the connections and interactions between elements and parts of a communication.

3. Analysis of organizational principles
   Identification of the organization, systematic arrangement, and structure which hold the communication together. This includes the "explicit" as well as "implicit" structure. It includes the bases, necessary arrangement, and mechanics which make the communication a unit.

Synthesis

The putting together of elements and parts to form a whole. This involves the process of working with pieces, parts, elements, and so forth and arranging and combining them in such a way so as to constitute a pattern or structure not clearly present before.

1. Production of a unique communication
   The development of a communication in which the writer or speaker attempts to convey ideas, feelings, or experiences or all three to others.

2. Production of a plan, or proposed set of operations
   The development of a plan of work or the proposal of a plan of operations. The plan should satisfy the requirements of a task that may be given to the

student or that he may develop for himself.

3. Derivation of a set of abstract relations
   The development of a set of abstract relations either to classify or explain particular data or phenomena, or the deduction of propositions and relations from a set of basic propositions or symbolic representations.

Evaluation

Judgements about the value of material and methods for given purposes: quantitative and qualitative judgements about the extent to which material and methods satisfy criteria; use of a standard of appraisal. The criteria may be determined by the student or given to him.

1. Judgements in terms of internal evidence
   Evaluation of the accuracy of a communication from such evidence as logical accuracy, consistency, and other internal criteria.

2. Judgements in terms of external criteria
   Evaluation of material with reference to selected or remembered criteria.

5.6.3 AFFECTIVE DOMAIN

Receiving (attending)

1. Awareness
   Awareness is almost a cognitive behavior. But unlike knowledge the lowest level of the cognitive domain, awareness is not so much concerned with a memory of or ability to recall an item or fact as with the phenomenon that, given an appropriate opportunity, the learner will merely be conscious of something-that he will take into account a situation, fact or event, object, or state of affairs.

2. Willingness to receive
   At a minimum level we are here describing the behavior of being willing to tolerate a given stimulus, not to avoid it.

3. Controlled or selected attention
   There is an element of the learner's controlling the attention here, so that the favored stimulus is selected and attended to despite competing and distracting stimuli.

Responding

1. Acquiescence in responding
   The student makes the response, but he has not fully accepted the necissity for doing so.

2. Willingness to respond
   There is the implication that the learner is sufficiently committed to exhibiting a behavior so that he does not just because of a fear of punishment, but "on his own" or voluntarily.

3. Satisfaction in response
   Behavior is accompanied by a feeling of satisfaction, an emotional response, generally of pleasure, zest, or enjoyment.

Valuing

1. Acceptance of a value
   The learner is sufficiently consistent that others can identify the value and sufficiently committed that he is willing to be so identified, but there is more of a readiness here to re-evaluate his position than would be present at higher levels of valuing.

2. Preference for a value

Behavior at this level implies not just the acceptance of a value to the point of being willing to be identified with it, but more, a seeking it out and wanting it.

3. Commitment
   Belief at this level involves a high degree of certainty. There is a real motivation to act out the behavior.

Organization

1. Conceptualization of a value
   At this level the quality of abstraction or conceptualization is added. It permits the individual to see how the value relates to those that he already holds or to new ones that he is coming to hold.

2. Organization of a value system
   Objectives properly classified here are those that require the learner to bring together a complex of values, possibly disparate values, and to relate them in an ordered fashion with one another. Ideally, the ordered relationship will be one which is harmonious and internally consistent.

Characterization by a value or value complex

1. Generalized set
   A generalized set is a basic orientation that enables the individual to reduce and order the complex world about him and to act consistently and effectively in it. The generalized set may be thought of as closely related to the idea of an attitude cluster.

2. Characterization
   Here are found those objectives that concern the individual's view of the universe, his philosophy of life ... a value system having as its object the whole of what is known or knowable.

5.6.4 PSYCHOMOTOR DOMAIN: A TENTATIVE SYSTEM

Perception

Process of becoming aware of objects, qualities, or relations by way of the sense organs.

1. Sensory stimlation
   Impingement of a stimulus (i) on one or more of the sense organs.
   - Auditory
   - Visual
   - Tactile
   - Taste
   - Smell
   - Kinesthetic

2. Cue Selection
   Identification of the cue or cues, association of them with the task to be performed, and grouping of them in terms of past experience and knowledge. Cues relevant to the situation are selected as a guide to action; irrelevant cues are ignored or discarded.

3. Translation
   The mental process of determining the meaning of the cues received from action. It involves symbolic translation, that is, having an image or being reminded of something, "having an idea" as a result of cues received; insight; sensory translation; and "feedback."

Set

A preparatory adjustment or readiness for a particular kind of action or experience.

1. Mental Set
   Readiness, in the mental sense, to perform a certain motor act. This involves, as prerequesite, the level of perception already identified. Discrimination, using judgements in making distinctions, is an aspect.

2. Physical Set
   Readiness in the sense of having made the anatomic adjustments necessary for motor act to be performed, including sensory attending and posturing of the body.

3. Emotional Set
   Readiness in terms of attitudes favorable to the motor act's taking place.

Guided response

The overt behavioral act of an individual under the guidance of the instructor. Prerequisite to performance of the act are readiness to respond and selection of the appropriate response.

1. Limitation
   The execution of an act as a direct response to the perception of another person performing the act.

2. Trial and error

   Trying various responses, usually with some rationale for each response, until an appropriate response is achieved.

Mechanism

Learned response has become habitual. The learner has achieved a certain confidence and degree of skill. The act is a part of his repertoire of possible responses to stimuli and to the demands of situations where the response is an appropriate one. The response is maybe more complex than at the preceding level; it may involve some patterning of response in carrying out the task.

Complex overt response

Performance of a motor act that is considered complex because of the movement pattern required. A high degree of skill has been attained, and the act can be carried out with minimum expenditure of time and energy.

1. Resolution of uncertainty
   Performance of a complex act without hesitation.

2. Automatic performance
   Performance of finely coordinated motor skill with a great deal of ease and muscle control.

Adaptation

Altering motor activities to meet the demands of new problematic situations requiring a physical response.

Origination

Creating new motor acts or ways of manipulating materials out of understandings, abilities, and skills developed in the psychomotor area.

5.6.5 EXPERIENTIAL DOMAIN: A PROPOSED TAXONOMY

Exposure

Consciousness of an experience. This involves two kinds of exposure and a readiness for further experience.

1. Sensory
   Through various sensory stimuli one becomes exposed to the possibility of an experience.

2. Response
   Peripheral mental reaction to sensory stimuli. At this point one regrets or accepts further interaction with the experience.

3. Readiness
   At this level one accepts the experience and anticipates participation.

Participation

The decision to become physically a part of an experience. There are two levels of interaction within this category.

1. Representation
   Reproducing an exisitng mental image of the experience, mentally or physically or both, i.e., visualizing, role playing, dramatic play. This can be done in two ways:
   - Covertly: as a private personal "walk-through" rehearsal.
   - Overtly: in a small/large group interaction, i.e., the classroom or workplace.

2. Modification
   The experience develops with the input of past personal activities and the experience grows. As there is a personal input into the participation, one moves from role player to active participant.

Identification

As the participant modifies the experience, the process of identification with the experience begins. There are four levels of activity within this category.

1. Reinforcement
   As the experience is modified and repeated, there is a

reinforcement of the experience involving a decision to identify with the experience.

2. Emotional
   The participant becomes emotionally identified with the experience. It becomes "my experience."

3. Personal
   The participant moves from an emotional identification to an intellectual commitment which involves a rational decision of identification.

4. Sharing
   Once the process of identification is accomplished, the participant begins to share the experience with others as a positive factor in his life.

Internalization

The participant moves from identification to internalization when the experience begins to affect the life-style of the participant. There are two levels in this category.

1. Expansion
   The experience enlarges into many aspects of the participant's life. He changes attitudes and activities as a result of the experience. When these become more than temporary, the participant moves to the next category.

2. Intrinsic
   The participant's life-style becomes characterized by the experience and that character remains more constant than at the expansion level.

Dissemination

The experience moves beyond internalization to the dissemination of the experience. It goes beyond positive sharing which began above and involves two levels of activity.

1. Informational
   The participant seeks to stimulate others to have an equivalent experience through descriptive and personalized sharing (advertising)

2. Homiletic
   The participant sees the experience as an imperative for others to have (marketing).

5.7 RESEARCH TECHNIQUES

Research is often considered a five faceted problem solving process:

1. analysis by examination of phenomenon, or context, & partitioning of data into meaning;
2. treatment or experience which striving for perdictive knowledge that "x" will cause "y";
3. representativeness that allows generalization from sample
4. measurement, the objectification of observation;
5. logic, the empirical question & the inference; what is "x", then if hypothesis "h" is true then "x" will be observed given a control of all other possible explanations. (Gephart, 1980)

DIFFERENCES AMONG FORMAL EDUCATIONAL RESEARCH, ACTION RESEARCH, PARTICIPATORY RESEARCH, AND THE CASUAL APPROACH TO PROBLEM SOLVING IN EDUCATION

TRAINING REQUIRED

Formal Educational Research

Extensive training in measurement, statistics, and research methods is needed. Much of the scientific research done in education is weak because of deficiencies of the researchers in these areas.

Action Research

Only a limited training in statistics and research methods is needed because rigorous design and analysis are not usually necessary. More training in educational measurement is needed than most teachers possess. Even if teachers research skills are low, good action research can be carried out with the aid of a consultant.

Participatory Research

Extensive training in interpersonal communications & measurement techniques is needed.

Casual or "Common Sense" Approach

No training is needed. This is the same method used since prehistoric times to achieve faulty solutions to ill defined problems.

GOALS

Formal Educational Research

To obtain knowledge that will be generalizable to a broad population and to develop and test educational theories.

Action Research

To obtain knowledge that can be applied directly to the local situation, and to give the participating teachers inservice training.

Participatory Research

To assist lay persons obtain the appropriate knowledge, attitude or behavior applicable directly to their local situation.

Casual or "Common Sense" Approach

To make changes in the current procedures that appear likely to improve the situation.

LOCATING THE PROBLEM

Formal Educational Research

Problems identified by a wide range of methods. Research workers must understand the problem, but is usually not directly involved in it.

Action Research

Problems identified in the school situation that are causing the research worker trouble or are interfering with the efficiency of his teaching.

Participatory Research

Problems are being lived the the persons involved and are limiting their socio-economic effectiveness.

Casual or "Common Sense" Approach

Problems identified in same manner as action research.

HYPOTHESES

Formal Educational Research

Highly specific hypotheses are developed that employ operational definitions and are testable.

Action Research

A specific statement of the problem usually serves as the research hypotheses. Ideally, action research hypotheses should approach rigor of formal research.

Participatory Research

A tentative statement of the problem as perceived by the persons involved, together with psycho-culturally defined parameters, serves as the research hypothesis.

Casual or "Common Sense" Approach

Specific hypotheses not established. Participants rarely progress beyond a fuzzy and ill-defined concept concerning the nature of the problem.

REVIEW OF THE LITERATURE

Formal Educational Research

An extensive review of primary source materials is usually carried out, giving the research worker a thorough understanding of the current state of knowledge in the research area. This enables him to build upon the knowledge accumulated by others.

Action Research

A review of available secondary sources gives the teacher a general understanding of the area to be studied. Exhaustive review of primary sources is almost never done.

Participatory Research

A careful delineation of the local "reality" is carried out by the persons involved allowing, in the process, the external researcher to "assume" the same reality; the review of primary & secondary sources is brought to the persons by the researcher-resource person.

Casual or "Common Sense" Approach

Usually no review of the literature is carried out. although one or two secondary sources may be checked.

SAMPLING

Formal Educational Research

Research worker attempts to obtain a random or otherwise unbiased sample of the population being studied, but is usually not completely successful.

Action Research

Learners available in a group accessible by the teacher doing the research are used as subjects.

Participatory Research

The persons concerned with the problem form the universe population, & the sample is drawm from them.

Casual or "Common Sense" Approach

Some casual observation of pupil behavior may be made by the teacher after the change decided upon has been in effect for a while.

EXPERIMENTAL DESIGN

Formal Educational Research

Design is carefully planned in detail prior to start of the study and adhered to as closely as possible. Major attention is given to maintaining comparable conditions and reducing error and bias. Control of extrenal variables is important.

Action Research

Procedures are planned in general terms prior to start of study. Changes are made during the study if they seem likely to improve the teaching situation. Little attention is paid to conditions or reduction of error. Because participating teachers are ego-involved in the research situation, bias is usually present.

Participatory Research

The persons involved identify possible strategies & a concensus emerges as to an appropriate strategy; the external researcher suggests implications of particular strategies drawing from the literature & similar experiences.

Casual or "Common Sense" Approach

If classroom testing of the decision is attempted, procedures are planned only in the most general terms. No attempt is made to establish common definitions or procedures among participating teachers.

MEASUREMENT

Formal Educational Research

An effort is made to obtain the most valid measures available. A thorough evaluation of available measures usually precedes their use in the research.

Action Research

Less rigorous evaluation of measures than in scientific research. Participants often lack training in the use and evaluation of educational measures, but can do a satisfactory job with help of a consultant.

Participatory Research

Continuous appraisal feedback substitutes for outcome evaluation; the external researcher's expertise in discriminating amongst results & a variety of measurement protocols is crucial in the developmental process.

Casual or "Common Sense" Approach

Usually no evaluation is made except for the casual observations of the teachers participating. The teacher's opinion as to whether the new procedure is an improvement or not depends almost entirely on whether the teacher approves the change.

ANALYSIS OF DATA

Formal Educational Research

Complex analysis is often called for. Inasmuch as generalizability of results is a goal, statistical significance is usually emphasized.

Action Research

Simple analysis procedures usually are sufficient. Practical significance rather than statistical significance is emphasized. Subjective opinion of participating teachers is often weighted heavily.

Participatory Research

Continuous analysis of data throughout the course of the research, with integrated feedback loops, allows for the persons involved to modify their strategy, in minor & major ways, on a moments notice.

Casual or "Common Sense" Approach

Subjective opinion of the participants is usually the only procedure used. No attempt made at objective analysis.

APPLICATION OF RESULTS

Formal Educational Research

Results are generalizable, but many useful findings are not applied in educational practice. Differences in training and experience between research workers and teachers generate a serious communicaton problem.

Action Research

Findings are applied immediately to the classes of participating teachers and often lead to permanent improvement. Application of results beyond the participating teacher is usually slight.

Participatory Research

There are no final results in that the persons only reach a point in a continuous process where they are able to redefine the problem in order to design new strategies to attack it.

Casual or "Common Sense" Approach

Decisions reached are applied immediately in classes of participating teachers. Even if the decision leads to improvement, it is often changed later because no evidence is available to support its continuance. This approach leads to educational fads and "change for the sake of change."

5.8. VALIDITY AND RELIABILITY

5.8.1 VALIDITY

Validity is second in importance to reliability. Validity is dependent upon, but independent of, reliability. It is dependent upon it in the sense that reliability is a necessary precondition for validity. Obviously, until we have an instrument which does something accurately, there is no hope of it doing exactly what we want it to do. It is independent in the sense that even perfect reliability tells you only that perfect validity is possible; it tells you nothing about the extent to which validity has been achieved (Fox, 1970).

"Validity refers to the ability of an instrument or tool (questionnaire) to truly measure what it purports to measure."

By definition, the test of validity of my questionnaire would be that acceptable authorities in the field, having been given my objectives for asking each item on the questionnaire, agree that each individual item and indeed the whole questionnaire, truly measures what it purports to measure (Driscoll, 1980).

Validity of evaluation is dependent upon:
1. Validity of data collected.
2. Comprehensiveness of the evaluation.
3. Identification and evaluation of unintended outcomes.
4. Proportional weighting of product and process evaluation (Zais,1976).

CONTENT VALIDITY

Content validity is sometimes equated with face validity, although there is an important distinction between them. "True content validity argues that the instrument measures what it seeks or purports to measure because of rational or empirical sources of the actual content" (Fox, 1970).

CONSTRUCT VALIDITY

In proceeding with validation procedures in order of relative strength, construct validity is next. Construct validity has two stages. The first stage is to identify two groups, which by criterion, should differ on what the instrument seeks to measure. Presumably, these groups would be expected to differ in their responses to the questionnaire.

A frequent parallel to this criterion basis for construct validity is to develop the groups to be tested on the basis of an assumption. The validity of the questionnaire, in this case, would rest on whether or not the assumption is accepted.

The final approach to construct validity utilizes some concept or construct, generally derived from theory. This may be fine in attempting to relate something like examination results to theories regarding anxiety.

In addition, Kerlinger and Fox point out that the construct validity argument is relevant if meaurement sought is at a gross level. A researcher seeking finer levels of measurement would therefore conclude that construct validity would not offer impressive evidence (Driscoll, 1980).

CONCURRENT VALIDITY

Concurrent validity refers to the power of a criterion to discriminate between groups known to differ in job proficiency. The researcher who offers concurrent validity will generally be presenting correlational data to show that performance on his instrument correlated highly with performance on some already existing and accepted measure of the characteristic under study.

PREDICTIVE VALIDITY

The last approach to validity, and cited as the most powerful evidence for it, is predictive validity.

> The researcher offering you predictive validity is arguing that he has used data obtained from his instrument to make predictions about respondents, generally predictions about future behavior. He has then waited until sufficient time has elapsed for him to know whether or not those predictions came true, and evaluated the extent to which he was correct (Fox, 1970).

5.8.2 RELIABILITY

Reliability refers to the ability of a data-gathering instrument (questionnaire) to elicit an accurate response in that a restatement of the question would evoke the same or similar results (Driscoll, 1980).

Reliability is defined in these terms:

> If a criterion is to be used as an index of the performance of individuals, it must be a stable index. It must reflect the relatively permanent, or continuing level of performance of the several individuals on the job in question. This stability or consistency of performance is called the reliability of the criterion. (Tifflin, McCormick, 1965)

Reliability includes the following elements: dependability, stability, consistency, predictability and accuracy. Reliability "is the accuracy or precision of measuring instrument" (Kerlinger, 1973) "Reliability means the accuracy of the data in the sense of their stability or repeatability." (Fox, 1970)

Reliability can be approached in three ways.

> One approach is epitomized by the question: If we measure the same sort of objects again and again with the same or comparable measuring instrument will we get the same results? This question implies a definition of reliability in stability, dependability, predictability terms.
>
> A second approach is epitomized by the question: Are the measures obtained from a measuring instrument the "true" measures of the property measured? This is an accuracy definition.
>
> There is a third approach to the definition of reliability, an approach that not only helps us better define and solve both theoretical and practical problems but also implies other approaches and definitions. We can inquire how much error of measurement there is in a measuring instrument (Kerlinger, 1973).

TEST-RETEST

In describing test-retest reliability most authors refer to administration of the instrument to the same people on two separate occasions.

GROUP RESULTS

If we are interested in group results, we can afford to operate with measuring instruments of relatively low reliability compensating for the low reliability by increasing the size of the sample. However, if we are interested in making statements or predictions about particular individuals on the basis of their scores, reliabilities below .90 are risky (Selltiz, 1959).

REPRESENTATIVENESS OF THE UNIVERSE

Survey samples must represent the populations from which they are drawn if they are to provide useful estimates about the characteristics of that population. Realize that they need not be representative in all respects, representativeness, as it has any meaning in regard to sampling is limited to those characteristics that are relevant to the substantive interests of the stufdy (Babbie, 1973).

STRATIFICATION

The major control that an investigator has available to him in connection with some variables is in the sampling process itself. He can try to assure that important segments of the population are not entirely unrepresented in his sample, try to benefit from his experiences and sample in such a way that many possibly relevant variables are not too grossly distorted in his sample and hope that whatever disproportions remain will not have any bearing on the opinions, preferences, etc., that he is interested in (Selltiz, 1959).

Assuring that all significant aspects of the characteristic are represented in the sample is achieved through a process called stratification, i.e. dividing the population into subgroups or strata on the basis of the characteristic for which you seek representativeness and creating your sample by separate selections from each sample (Fox, 1970).

PROBABILITY

The basic principle of probability sampling is the following:

> A sample will be representative of the population from which it is selected, if all members of the population have an equal chance of being selected in the sample ...The sample survey researcher must be prepared to tolerate a certain ambiguity; we are seldom able to determine how accurate our sample findings are

(Babbie, 1973).

FREEDOM FROM KNOWN BIASES

A bias is an extraneous factor which distorts criterion scores. Uncontrolled situational variables may also influence criterion performance. Biases reduce the validity and/or the reliability of criteria.

FEASIBILITY

Feasibility refers to the difficulty in collecting criterion data. For convenience, we may distinguish three levels of difficulty. At the easiest level, criterion data are collected at the training center without any outside assistance. At a moderate level of difficult, someone outside the training centre must take on data collection activities in addition to his or her regular job duties. At the most difficult level, data collection is a full time, temporary special assignment. Level of difficulty thus refers to the ease of obtaining complete and unbiased data from the point of view of the evaluator, not the data collector.

DIAGNOSTIC CAPABILITY

Diagnostic capability refers to using the criterion data to detect performance deficiencies of individual learners. When data are summed across learners, the data may be used to diagnose deficiencies in the course.

> The relevance of a criterion refers to the extent to which criterion measures of different individuals are meaningful in terms of the objectives for which such measures are derived
> ... Every job exists for some purpose, or complex of purposes
> ... Relevance, then relates to the adequacy of criterion measures as indices of the relative abilities of individuals in fulfilling such purposes.

5.9. INFORMATION GATHERING TECHNIQUES

Each time an assessment, appraisal or evaluation is conducted it should follow a specific design and utilizes one or several tools of measurement and information gathering; interviews, surveys, tests, group problem analysis, and observation are examples of techniques that can be utilized in judging achievement.

Before choosing a method for assessing needs it is important to examine the advantages & disadvantages of such methods as: interview, questionnaire, tests, group problem analysis, job analysis, performance review, records and reports study (Knowles,1970).

The adult educator's task is to devise, and use the techniques and instruments which reveal the apparent interests and the felt or ascribed needs of the learners (Houle,1972).

5.9.1 DELPHI

Using A Delphi Technique for Assessing Learning Needs

Round One

An open-ended question is sent to all participants teachers asking, "What do you think are some of our needs in "x" field are " The responses are summarized and listed Duplicate needs are combined. A single list of stated needs results.

Round Two

The list is sent back to all participants with a note saying, "Here are the needs as stated by you and your colleagues. Look at the list carefully. For each need, indicate if you agree that it is a need for our program or if you feel it is not a need." A frequency count is made for all need statements. The number of people who agreed that the statement was indeed a need are noted. Any statements that receive few, or no "agrees" are dropped. A new list results.

Round Three

The new list is sent around with the following directions: "Here is the list of statements people agreed are needs. How important is each need? For each need assign a rank, with the most important need ranked 1, etc." Responses are summarized. Needs are ranked according to the mean ranking of each.

Round Four

The ranked list is sent around with the directions: "Do you agree with the ranking of these needs"

(Note: The technique was originally developed at the Rand Corporation 1953. Essentially it is a sequential procedure for gathering and sharing opinions about particular issues without face-to-face debate.)

5.9.2 OBSERVATION

Another form of judging is observational data analysis:

> One of the harms of the past emphasis on research-type activities is that it has downplayed and obscured the importance of the programmer building the type of evaluation competency shown, for example, in judging diving competitions. The research approach replaces human skill with computer printouts. Adult Education has not, as a field, been sufficiently counterbalanced with emphasis on building professional judgment. This trend must be reversed. In the long run, it's at least as important for the adult educator to be able to judge the attainment of objectives on the spot as he progresses with the teacher-learner interaction (i.e. through discussion, work assignments in class, etc.) as it is for him to master research and statistical techniques. The information provided by such techniques and the techniques themselves are aids to improving his observation but should never be viewed as a replacement for it. Unfortunately there is little in the literature about how accuracy can be developed in direct observation by the programmer. It should be one of his key professional tools in the same sense that diagnosis is one of the key professional tools of the doctor (Steele, 1973).

Everyone whether they know it or not uses this form of appraisal. Usually though its "off the cuff". The group looks happy or discussion was lively. Observation is a very useful tool if you decide beforehand what you're going to look for.

All of these techniques are useful. Most people find that the best way to deal with the problem of appraisal is to use a little of everything. Different things will fit better at different times. When choosing your method of appraisal you should consider the following:

- the amount of time available
- the group size
- how much information you want
- the group members
- what kind of information you want
- what you're going to do with the information when you get it

and most important of all: What you wanted to achieve in the first place.

Remember the old adage: If you don't know where you're going you're sure to get there.

Observation:

- can be as technical as time-motion studies or as functionally or behaviorally specific as observing a new board or staff member interacting during a meeting;
- may be as unstructured as walking through offices on the lookout for evidence of communication barriers;
- can be used normatively to distinguish between effective and ineffective behaviors, organizational structures, and/or process.

Advantages:

- minimizes interruption of routine work flow or group activity;
- generates in situ data highly relevant to the situation where responses to identified training needs /interests will impact;
- (when combined with a feedback step) provides for important comparison checks between inferences of the observer and the respondent.

Disadvantages:

- requires a highly skilled observer with both process and content knowledge (unlike an interviewer who needs, for the most part, only process skill;
- carries limitations that derive from being able to collect data only within the work setting (the other side of the first advantage listed in the preceding column);
- holds potential for respondents to perceive the observation activity as "spying".

5.9.3 QUESTIONNAIRE DEVELOPMENT

Whether working from a rigorously deduced theory or from a set of tentative suspicions or curiousities, the researcher at some point if faced with a set of unspecified, abstract concepts that he believes will assist his understanding of the world around him. In survey research, these concepts must be converted into questions in a questionnaire, thus permitting the collection of empirical data relevant to analysis (Babbie, 1973)
Authors seem to be very consistent and explicit regarding the following points:

1. Keep the language pitched to the level of the respondent.
2. Try to pick words that have the same meaning for everyone.
3. Avoid long questions.
4. In forming a question, either suggest all possible alternatives to the respondent or don't suggest any.
5. Limit questions to a single idea or a single reference.
6. Go from the general to the specific.
7. Arrange the questions so that they make sense to the respondents. The aim is to secure a sequence that is natural and easy for the respondents.
8. Select paper and type carefully. The use of type-print can produce a memeographed questionnaire on good paper that looks like printed copy.
9. A regular stamped envelope produced better results that the business-reply envelope.

(Miller, 1974) 10. Every questionnaire, whether to be self-administered by respondent or administered by an interviewer, should contain clear instruction and introductory comments where appropriate. (Babbie, 1964)

Authors make it quite clear that despite these pointers, pre-testing is a necessity in the development of a credible tool. Even rigid adherance to their suggestions would not ensure a final product on first try by the most accomplished questionnaire writer (Driscoll, 1980).

Consideration must also be given to the merits of open-ended as opposed to closed-ended questionaires; the latter being more directive than the former (Morgan,1968).

A questionnaire is often used as a means of securing information on areas of need. The questionnaire itself is a tool that takes many forms depending on the target group or individual, the form the data is to take, etc.

There are two kinds of questionnaires which might be helpful. The first is called open-ended. Group members are asked to "write down" what they think about sessions in relation to their goals. (They may need to be reminded of exactly what the goals were.) Sometimes it's useful to ask some general questions. These will help group members to answer. This type of questionnaire lets people "write what they think" but it takes alot of time to complete and to analyze. It also assumes that participants like to and are good at writing.

The second is called closed. This is the fill in the blanks or check the boxes type. The participants are given a sheet of paper with a number of questions relating to how well the group has met its goals, a series of possible answers is also provided. Group members then pick the one which is most appropriate for them.

This type of questionnaire doesn't really give group members much room to say what they think but it is quicker, more to the point and easier for part icipants to complete and you to analyze.

There are a few things you should remember about questionnaires.

1. Avoid double barreled questions. These are questions where there is more than one answer. Ex: A question might read - Did you enjoy attending the group sessions and taking part in the discussions? A participant might have enjoyed the sessions but not taking part in discussions.

2. Don't make the questionnaires too long.

3. Give the person a "way out" by providing a maybe or perhaps answer.

4. Make sure all your questions are on the topic - don't ask questions just for the sake of asking them or because you've seen them in other questionnaires.

5. Check the questionnaire out by giving it first to someone who uses questionnaires alot and ask them for their comments. Then get a couple of people to fill it out for you. Ask them if they understand the questions, if they found any questions contradicting or unclear, if they can think of anything to be added. Ask your group the same questions after they have completed it.

Questionaires:

- may be in the form of surveys or polls of a random

or stratified sample of responents, or, an enumeration of an entire "population";
- can use a variety of question formats: open-ended, projective, forced-choice, priority-ranking;
- can take alternative forms such as O-sorts, or slip-sorts, rating scales, either pre-designed or self-generated by respondent(s);
- may be self-administered (by mail) under controlled or uncontrolled conditions, or may require the presence of an interpreter or assistance.

Advantages:
- can reach a large number of people in a short time;
- are relatively inexpensive;
- give opportunity of expression without fear of embarassment;
- yield data easily summarized and reported.

Disadvantages:
- make little provision for free expression of unanticipated responses;
- require substantial time (and technical skills, especially in survey model) for development of effective instruments;
- are of limited utility in getting at causes of problems or possible solutions;
- suffer low return rates (mailed), grudging responses, or unintended and/or inappropriate respondents.

Tests:

- are a hybridized form of questionnaire.
- can be very functionally oriented (like observations) to test a board, staff, or committee member's proficiency.
- may be used to sample learned ideas and facts.
- can be administered with or without the presence of an assistant.

Advantages:
- can be especially helpful in determining whether the cause of a recognized problem is a deficiency in knowledge or skill or, by elimination, attitude.
- results are easily quantifiable and comparable.

Disadvantages:
- the availability of a relatively small number of tests that are validated for a specific situation.
- do not indicate if measured knowledge and skills are actually being used in the on-the-job or "back home group" situation.

5.9.4. INTERVIEW

There are several ways to interview people. One way is to set aside some time at a group meeting for appraisal. Beforehand you decide what you want to know and some questions you can ask to help you find it out. Then you meet with the group and through relaxed discussion ask the questions. When the session has ended you simply write a summary of the group's responses. This provides you with a general picture of how far along you've gotten.

Another way to interview is to think of what you want to know and actually write down some questions which will help the group to tell you. Again you set aside some time during a group session, ask the group the questions, and write down the answers. After the session has finished you put all the answers together. This method allows you to avoid beating around the bush and ask specific questions and get specific answers. Its quicker than the first way but it might make some group members uncomfortable.

A third way to interview is to decide what you want to know; write down some questions and meet with group members one at a time to find out the answers. When you put all the answers from all the group members together you find out how the whole group feels. This method lets you be more personal and allows some members who might be a bit shy in the group to speak out.

No matter what way you choose there are several things to remember about interviewing :

1. Questions must be asked in a non-threatening manner. People are much more inclined to answer truthfully if you ask.
   Would you care to tell me why you did such and such than if you say, why did you do such and such.

2. Avoid hinting to group members about the answers you want to certain questions. You didn't do this did you.

3. Watch out for your body language. If you smile and nod your head when a group member is speaking he'll try to get the same "approval" again.

4. Be warm and open. Group members will feel free to answer your questions.

Interviews:

- can be formal or casual, structured or unstructured, or somewhere in between.

- may be used with a sample of a particular group (board, staff, committee), or conducted with everyone concerned.
- can be done in person, by phone, at the work site or away from it.

Advantages:

- are adept at revealing feelings, causes of and possible solutions to problem which the client is facing (or anticipates); provide maximum opportunity for the client to represent himself spontaneously on his own terms (especially when conducted in an open-ended, non-directive manner.)

Disadvantages:

- are usually time consuming.
- can be difficult to analyze and quantify results (especially from unstructured formats).
- unless the interviewer is skillful, the client(s) can easily be made to feel self-conscious.
- rely for success on a skillful interviewer who can generate data without making client(s) feel self-conscious, suspicious, etc.

Group Discussion:

- resembles face-to-face interview technique, e.g., structured or unstructured, formal or informal, or somewhere in between.
- can be focused on job (role) analysis, group problem analysis, group goal setting, or any number of group tasks or themes, e.g., "leadership training needs of the board."
- uses one or several of the familiar group facilitating techniques, brainstorming, nominal group process, force-fields, consensus rankings, organizational mirroring, simulation, and sculpting.

Advantages:

- permits on-the-spot synthesis of different viewpoints.
- builds support for the particular service response that is ultimately decided on.
- decreases client's "dependence response" toward the service provider since data analysis is (or can be) a shared function.
- helps participants to become better problem analysts, better listeners, etc.

Disadvantages:

- is time consuming (therefore initially expensive) both for the consultant and the agency.
- can produce data that are difficult to synthesize

and quantify (more a problem with the less structured techniques).

Key Consultation:

- secures information from those persons who, by virtue of their formal or informal standing, are in a good position to know what the training needs of a particular group are:
  a. board chairman
  b. related service providers
  c. members of professional associations
  d. individuals from the service population
- once identified, data can be gathered from these consultants by using techniques such as interviews, group discussions, questionnaires.

Advantages:
- is relatively simple and inexpensive to conduct;
- permits input and interaction of a number of individuals, each with his or her own perspectives of the needs of the areas, discipline, group, etc. ;
- established and strengthens lines of communication between participants in the process.

Disadvantages:
- carries a built-in bias, since it is based on views of those who tend to see training needs from their own individual or organizational perspective;
- may result in only a partial picture of training needs due to the typically non-representative nature (in a statistical sense) of a key informant group.

5.9.6 OTHER SOURCES OF INFORMATION

Print Media:

- can include professional journals, legislative news/notes, industry "rags", trade magazines, in-hours publications.

Advantages:
- is an excellent source of information for uncovering and clarifying normative needs;
- provides information that is current, if not forward- looking;
- is readily available and is apt to have already been reviewed by the client group.

Disadvantages:
- can be a problem when it comes to the data analysis and synthesis into a useable form (use of clipping service or key consultants can make this type of data more useable).

Records, Reports:

- can consist of organizational charts, planning documents, policy manuals, audits and budget reports.
- employee records (grievance, turnover, accidents, etc.)
- includes minutes of meetings, weekly/monthly program reports, memoranda, agency service records, program evaluation studies.

Advantages:
- provide excellent clues to trouble spots.
- provide objective evidence of the results of problems within the agency or group
- can be collected with a minimum of effort and interruption of work flow since it already exists at the work site.

Disadvantages:
- causes of problems or possible solutions often do not show up.
- carries perspective that generally reflects the past situation rather than the current one (or recent changes).
- need a skilled data analyst if clear patterns and trends are to emerge from such technical and diffuse raw data.

Work Samples

- are similar to observation, but in written form.
- can be products generated in the course of the organization's work, e.g., ad layouts, program proposals, market analyses, letters, training designs, or
- written responses to a hypothetical, but relevant case study provided by the consultant.

Advantages:

- carry most of the advantages of records and reports data.
- are the organization's data (its own output).

Disadvantages:

- case study method will take time away from actual work of the organization.
- need specialized content analysis.
- analyst's assessment of strengths/weaknesses disclosed by samples can be challenged as "too subjective."

5.9.6 RATING SCALES

We've all heard the expression on a scale of one to ten how do you rate such and such. To set up a rating scale you must first decide "indicators" or "criteria" for meeting your goals. For instance, if your goal was to learn how to ride a bicycle and indicator might be to be able to steer it. The rating scale you would use would look like this.

To what extent were you able to steer your bicycle?

Not at all Very well
1 2 3 4 5 6 7

The person filling it in would be instructed to circle the appropriate number.

There might be five or six of these for each goal. When you put all the scales completed by each participant together you are able to see how well you are doing for each goal. When you put all the goals together you can find out how well you're doing in general.

One thing to remember - rating scales and criteria are complicated and hard to put together but if you write them in consultation with the group (in other words set one group session aside for the purpose of writing the criteria and developing of the scale) they are easier and provide a very good indication of progress.

The Likert Scale is the most often used of these rating instruments. Similar to the above, it provides for five choices:

1 2 3 4 5

The range of choice is simplified, while still allowing for extremes.

To control for a "4" level of constancy in the response, some evaluators are suggesting that "exceptional" and "laudatory" scores be marked: "6" and "7". This proceedure allows for more precision in the remainder of the scoring.

ADULT LEARNERS
AND
EDUCATORS

GLOSSARY

prepared by

Dorothy Landers & John R A Dobson

Department of Adult Education

SAINT FRANCIS XAVIER UNIVERSITY

> "The question is" said Alice, "whether you can make words mean so many different things."
> "The question is "said Humpty Dumpty, "which is to be master - that's all."
> - Carroll

INTRODUCTION

This Glossary of Terms in not intended to provide all-encompassing conclusive definitions of terms but rather it is meant to serve as an introductory guide to the terms as they are commonly used by educators. As a precise and consistent body of knowledge has not yet evolved, these terms can at best be speculative. They are defined in broad terms, an and as definitions are constantly changing with revisions and additions to knowledge.

The original Glossary was prepared by Ms Landers & has been periodically updated by Dr Dobson.

GLOSSARY

ACADEMIC LEARNING -The theoretical, the liberal, the speculative, & classical subject matter found to compose the curriculum of formal schools.

ACCOUNTABILITY -Responsibility for a specified performance, outcome, result.

ADMINISTRATION -The function provided by management in the planning, organizing, initiating, coordinating, operating, evaluating & revising procedures; or programs directed towards the completion of an assigned task or achievement of a goal.

ADULT -Any human being, past the age of puberty, who has discontinued his/her full time attendance in a formal school situation, & functions in one or more adult life roles, or any human being who has reached the legally prescribed age;

ADULT BASIC EDUCATION -Education for adults whose inability to speak, read, or write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability, which is designed to help eliminate such inability & raise the level of education of such individuals with the view of making them less dependent on others, to improve their ability to benefit from occupational training & otherwise increasing their opportunities for more productive & profitable employment, & to make them better able to meet their adult responsibilities.

ADULT EDUCATION -The process of establishing a helping relationship with individuals, or groups, past the cultural age of majority, with the objective of assisting these same individuals or groups to acquire the skill of arousing and controlling their own direction of change.) LL -A process by whcih the instructional needs of an adult, as perceived by themselves or others, are met through organized learning experiences.

-Services or instruction below the college level for adults who lack sufficient mastery of basic educational skills to enable them to function effectively in society or who do not have a certificate of graduation from a school providing secondary education & who have not achieved an equivalent level of education, & are not currently required to be enrolled in schools.

The process entered into deliberately by adult learners (alone, in groups, or in institutional settings) for the purpose of increasing their level of knowledge, understanding, skill, etc., by finding and using a variety of resources, including their own experience.

ADULT LEARNER An adult who is enrolled in any course of study, whether special or regular, to develop new skills or qualifications, or improve existing skills & qualifications.

ADVISORY COUNCIL A group of persons created to give advice on a particular project, program or organization.

AFFECTIVE -Of, caused by, or expressing emotion or feeling; pertaining to feeling or emotions, especially to pleasurable or unpleasurable aspects of mental process. An effective seminar will include affective as well as cognitive learning experiences.

AFFECTIVE LEARNING -The activity of learning in the area of human feeling and valuing, emotion or a degree of acceptance or rejection; affective learning expressed as interests, attitudes, appreciations, values and emotional sets or biases my be manifested in observable changes in behavior.

AGENCY -An institution or group, formal or informal in structure, formed & operating to alleviate & to serve specific needs of individuals in a neighborhood, community or city.

-A group of dedicated persons identified with a specific area of service.

ANALYSIS -The breakdown of a communication or set of data into its constituent elements such that the relative hierarchy of ideas is made clear and/or the relations between the ideas are made explicit, according to pre-established criteria.

ANCILLARY SERVICES -The supportive activities & resources necessary for the efficient achievement of the objectives of an organization or institution.

ANDRAGOGY -The art and science of helping adults learn, based on the assumptions that as a person matures:
(1) His self-concept moves from one of being a dependent personality toward one of being a self-directing human being.
(2) He accumulates a growing reservoir of eperience that becomes an increasing resource for learning.
(3) His readiness to learn becomes oriented increasingly to the development tasks of his social roles, and
(4) his time perspective changes from one of postponed application of knowledge to immediacy of application and accordingly his orientation toward learning shifts from one of subject-centeredness to one of problem-centeredness.

-The art and science of teaching adults and of adult learning in a climate where the adult is given primary consideration: contrasting with pedagogy.

APPRAISAL -A general & continuing evaluation of an activity, program, experience, or achievement, often semi-intuitive & of limited sophistication.

APPRENTICESHIP -A period of time during which a person learns a trade, skill, or role by practice & supervision.

ASSESSMENT -The process of measuring incoming attitude, behavior or or knowledge at the onset of an educative experience.

-The act of assessing, appraising, evaluating. Assessment of program effectiveness is necessary for the success of any educational endeavor.

ASSOCIATIVE LEARNING -Learning acquired by association of ideas, eg in identified relationship such as opposition, sequence, cause & effect.

ATTITUDE -An enduring, learned predisposition to behave in a consistent way toward a given class of objects.

ATTITUDE CHANGE -Some degree of change in the internalized or personalized feelings one has about persons, places, things or events. Although the change presents a shift in the individual's position, it may shift in either a negative or a positive direction from the original one.

AUDIOVISUAL AIDS -A broad range of devices used to enhance & facilitate information transfer, with emphasis on seeing & hearing, ranging from simple classroom equipment to projected slides, maps or diagrams, sound recordings, silent or sound film strips, films, & videotapes.

BEHAVIOR -The manner of behaving, acting; the aggregate of observable responses of the organism in their interrelationships. Behavior is based upon both thought & feeling.

BEHAVIORAL OBJECTIVE -A statement of the intended result of an educational activity in terms of an observable behaviour, the conditions under which the activity will take place, and the minimum acceptable standards for performance.

BEHAVIORISM: The behaviorist orientation considers man to be a passive organism governed by stimuli supplied by the external environment. Man can be manipulated, that is, his behavior controlled, through proper control of environmental stimuli. Furthermore, the laws that govern man are primarily the same as the universal laws that govern all natural phenomena. Therefore, the scientific method, as evolved by the physical sciences, is appropriate as well for the study of the human organism. (Milholland, 1972)

BILINGUAL EDUCATION -Historically considered to be a pretty pure form of simply teaching the individual to handle two different languages. Current emphasis in often placed on the teaching of English as a second language.

BRAINSTORMING -An unstructured, almost casual but highly supportive discussion of ideas with emphasis on rapid, free-wheeling production of a variety of imputs, as opposed to carefully considered, practical steps. All participants supposedly have complete freedom to make suggestions. They should be positively supportive of the atmosphere, & generally quite willing at least to consider any suggestions offered by any member of the group.

CAREER -One's progress through life: one's advancement or achievement in a particular vocation or profession to which one gives a professional & personal commitment.

CAREER EDUCATION -The conscious & structured effort on the part of an individual, either through their own or through beneficiary efforts of institutions, employers & technical & professional societies, to advance their proficiency, peer recognition & public acceptance in terms of occupational aims.

CERTIFICATE OF COMPLETION -A document attesting to the fact that a person has completed a specific set of learning experiences under sufficient supervision to be sure that the awardee did the prescribed work. There may or may not be formal classes, formal reading, or formal examinations.

CHANGE AGENT -Person, group or thing that effects or seeks to effect change - particularly an agent for change or social conditions.

CLASS The basic unit in the organizational structure of most formal learning; generally a group of learners which meets regularly for a fixed term to be instructed in one or more subjects or in an entire curriculum. A recent trend has been toward a more open & flexible grouping of students, based on their own needs, interests or abilities.

CLIENTELE That specific sub-group of the general population for which an institution, agency, or professional practitioner has a special interest, relationship and/or reason for being.

CO -with, together, in conjunction, jointly
1. verbs -cooperate, co-exist
2. participles, adjectives & adverbs - with the sense of in or the same degree, amount
3. nouns in general - importing rights or liabilities which are joint or in common.
4. nouns of agency, office or occupation, meaning fellow.
5. adjectives and adverbs expressing a sense of joint action or state.

COM -with, together.

COMMON -belonging to the community at large.

COMMONABLE -held in common.

COMMONAGE -rights in common.

COMMON CARRIER -community transportation.

COMMON COUNCIL -non-structured community accepted decision-making body.

COMMONALITY -general membership of a body corporate.

COMMON DENOMINATOR -a common multiple, usually the least of the denominators of a number of fractions.

COMMON FACTOR -a quantity that divides two or more quantities without a remainder.

COMMON LAW -the general and ordinary law of a community; unwritten law that receives its binding force from immemorial usage and universal acceptance.

COMMON LAW MARRIAGE -an agreement between a man and a woman to enter into a marriage relation without ecclesiatical or civil contract.

COMMON MULTIPLE -a multiple of each of two or more numbers, quantities, or expressions.

COMMON SENSE -sound, ordinary sense; good judgement.

COMMONER -a citizen; a community member.

COMMONLY -in a manner or degree that is common.

COMMONNESS -quality of being common.

COMMONPLACE -a passage noted for ready reference.

COMMONS -the mass of the people.

COMMONWEAL -the general welfare.

COMMOTION -disturbed or violent motion; a popular uprising.

COMMOVE -to disturb; agitate; unsettle.

COMMUNAL -of or pertaining to a commune.

COMMUNALISM -a system in which communes or other small political units that have large powers.

COMMUNE -to confer together.

-any of various bodies treated as a unit at law, as the peasantry sharing the common rights and property in a village community.

COMMUNICANT -one who communicates.

COMMUNICATE -to impart, to convey (a message); to converse to be connected; join.

COMMUNICABLE: -capable of communicating or of being communicated.

COMMUNICATION -act or fact of communicating; intercourse by words, letters or messages; interchange of thoughts or opinions.

COMMUNICATIVE -inclined to communicate.

COMMUNION -act of sharing.

COMMUNIQUE - a communication or piece of information given out officially.

COMMUNITY -a body of people having common organization or interest orliving in the same place under the same laws.

COMMUNITY DEVELOPMENT Educational efforts with individuals & groups for the purpose of improving the material, social, & aesthetic aspects of the life of the people living in a clearly defined geographical area.

COMMUNITY RELATIONS -The reciprocal pattern of interaction among members of a community that persists over a period of time so that a stable set of social expectations develop.

COMMUNITY SCHOOL PROGRAM -A program in which a public building, including but not limited to a school, is used as a community center operated in conjunction with other groups in the community, community organizations, & local government agencies, to provide eucational, recreational, cultural, and other related community services for the community; the programs should center on the needs, interests, and concerns of that community.

COMMUNITY SERVICE PROGRAM -An educational program, activity, or service including research which is designed to assist in the solution of community problems.

COMMUTATE -to turn or direct (a current) as to form a current continuous as to direction.

COMMUTATION
-a substitution, as of a lesser thing for a greater.

COMMUTATOR -a devise for reversing the direction of a current.

COMMUTE -to exchange, interchange, or substitute.

COMATE -a companion.

COMPANIONATE -shared in as by companions.

COMPANION -an associate, comrade; one of a pair or set oflike things.

COMPANIONSHIP -fellowship, association.

CODIFY -To reduce [a thought or feeling] to a code; to make a digest of; arrange in a systematic collection. A speaker codifies his/her thoughts into spoken words.

COGNITION -The act or process of knowing; perception. Addictions Core Knowledge is a program of cognitive learning.

COGNITIVE LEARNING -The type of learning which requires changes in cognitive constructs, such as recalling, differentiating, adjusting and synthesizing knowledge items - an internal process that can be tested only by observation of its effect on behaviour.

COMMUNICATIONS -The imparting or interchange of thoughts, opinions, or information by speech, writing, or signs. Two way communications are essential for dynamic group interaction.

COMPETENCY -The ability to perform some mental or physical act repeatedly, maintaining a constant quality of performance.

-The requisite ability to perform a specific task or qualify for a specific role; a functional qualification as opposed to a credential-based qualification.

CONCEPT -Anything one can think about that can be distinguished from other "things"; a concept requires both abstraction and generalization - the first to isolate the property, and the second to recognize that it may be ascribed to several objects.

CONFERENCE -An activity generally involving a large number of individuals sharing a common interest, planned for the dissemination of information to the participants & the collection of feedback from them in limited time. Usually included are expert speakers making single presentations or appearing on panels, alternating with small group discussion among participants.

CONSULTANT -Resource person available for expert or professional advice in the solution of a problem or achievement of a goal.

CONTINUING EDUCATION -Any purposeful effort toward self-development carried on by an individual without direct legal compulsion and without such efforts becoming his major field of activity.

COOPERATION -The working together toward some common end in a joint action.

COOPERATIVE EDUCATION -The linking of formalized education with the real world in which the learner is permitted the opportunity to apply that which is learned in a formal context to a problematic situation in the real world.

COOP EXTENSION EDUCATION -A unique venture amongst federal (USA), State, county governments with land-grant colleges serving as administrative centers.

COORDINATION -The function of bringing persons, groups, & institutions into unity for a common cause or common action

COORDINATOR -The individual responsible for unifying individuals or groups working for a common cause or action.

CORRESPONDENCE EDUCATION -An educational process designed to transfer a given body of information, skills, or knowledge to learners living at some distance from the teaching institution, usually as written or printed material sent by mail. The learner is provided with structured units of information, assigned exercises for practice, and examinations to measure achievement.

COUNSELING -The art (science) of helping an individual t solve a problem adequately through personal interaction.

COURSE -A planned sequence of educational activity, leading to the acquisition of a skill or body of knowledge, usually over a predetermined period of time.

COPE -To struggle or contend with, especially on fairly even terms or with some degree of success. Facilitators frequently must cope with harmful behaviors from learners.

CRITERIA OF EVALUATION -Standards, rules or tests used for measurement, both quantitative and qualitative, and on which an appraisal can be based.

CUM -Latin with

CURRICULUM -A systematic combination of instructional objectives and instructional materials and methods directed toward specific learning outcomes, as specified in the objectives.

-A planned sequence of educational activities, leading leading to the acquisition of skills or bodies of knowledge, either in a given period or in a given subject or group of subjects.

CURRICULUM DESIGN -The plan developed to guide educational activity in a situation, or a plan which can be inferred by an analyst of that activity.

DATA Useful facts or information used in making decisions & drawing conclusions.

DECODIFY [DECODE] -To translate (a message) from code into the original language or form. The brain decodes non-verbal messages according to past experience.

DEDUCTIVE ANALYSIS -The breakdown of a communication or a set of data into its constituent parts on the basis of the mode of reasoning that starts with these data as premises or propositions and attempts to derive valid conclusions from them.

DEPENDENT LEARNING -The changes in the cognitive processes or conceptualizations as evidenced by the extent to which a learner in a learning programme requires others (instructors or institutions) to determine his learning objectives and plan his learning procedures and activities and evaluation of his learning programme.

DEVELOPMENT -The act of developing, progressing; planned change. Articulating needs is one stage in the development of a group of learners.

DIAGNOSIS The process or procedure of determining the nature of a problem or disorder; a professional judgement made concerning a problem & possible solutions using tests & other appropriate devices.

DIPLOMA A document given by an educational institution testifying that a student has earned or successfully completed a course of study; a certficate conferring some honor or privilege.

DISADVANTAGED PERSON Given an idealized norm, any person who has not reached that norm because of external forces or conditions.

DISSONANCE -An inharmonious or harsh sound; discord. The facilitator must be able to recognize dissonance in the group's communication process.

EDUCATION -Any purposeful effort toward self-development carried on by an individual, or one that is planned to afford man/woman the opportunity to continually structure & restructure his/her cognitive & affective worlds.

EDUCATIONAL NEED -The discrepancy between what an individual (or organization or society) wants himself to be or to be able to do: the distance between aspirations and reality.

EMOTIONS -An affective state of conciousness in which joy, sorrow, fear, hate, or the like, is experienced, as distinguished from cognitive and volitional states of consciousness. The emotions of the group participants can be used by the facilitator.

-An affective state of conciousness in which joy, sorrow, fear, hate, or the like, is experienced, as distinguished from cognitive and volitional states of consciousness. The emotions of the group participants can be used by the facilitator.

ENROLLEE -A person who signs up, enlists, volunteers, registers, or contracts to be a student, participant, learner, subject, or pupil in a course, class, workshop or other learning situation.

ENVIRONMENT -The conditions, physical, social, cultural, & psychological, that act upon & influence the life of an individual, group or community.

-The aggregate of surrounding things, conditions, or influences, especially as affecting the existence or development of someone or something. Learning environments should be confortable & open.

EVALUATION -A judgement as to the vale of an activity, seeking to measure the extent to which the activity attained the objectives setforth.

-Judgements about the value of materials and methods and human performance for given purposes; quantitative and qualitative judgements about the extent to which materials and methods and the actions of the learner satisfy criteria - the criteria may be those determined by the learner or those which are given to him.

EVALUATION RESEARCH -The systematic and detailed analysis of the evaluation data, relative to hypotheses about learning methods and materials, to discover or confirm facts that bear upon the problems in a learning programme and the principles that govern it.

EXPERIENTIAL LEARNING -The change in the cognitive processes or conceptualizations as evidenced by the extent to which an adult learner identifies himself in terms of his life work, his leisure time activities, what his training and experience have equipped him to do, and what his achievements have been and the extent to which the learner uses and applies the knowledge retained from these experiences to develop further skills and solve current problems.

-To learn from experience is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying; an experiment with the world to find out what it is like; the undergoing becomes instruction - discovery of the connection of things. (Dewey, 1916)

-The active involvement & participation of the learner in a contrived or actual exercise that requires the learner to respond covertly or overtly. The learning activity is planned to provide the learner opportunity to actually experience that which is to be learned.

EXTENSION EDUCATION -Education offered outside the formal framework of the regular-university,residential-setting, credit-giving approach. It ordinarily includes such methods as conferences, short courses, institutes, independent study, credit courses offered in off-campus settings or via media.

FACILITATE -To make easier or less difficult; help forward (an action, a process, etc.; to assist the progress of (a person). To facilitate a group's development is not the same thing as teaching.

FACILITATION -The purpose of facilitation is to support the learning enterprise of an individual or a collectivity as he/they proceed through a process.

FACILITATOR -An individual who, like a catalyst, makes particular action possible by her/his presence and know-how.

FEEDBACK -A process by which useful data on an aspect of a program or activity is made available to the individuals responsible for the program or activity. it is a corrective loop whereby information on a program, product or activity is recycled for program improvement & renewal.

FELT NEED -The discrepancy between what a person (or persons) wants himself to be or to be able to do and what he is and is able to do, as perceived by himself.

FORMATIVE EVALUATION -Evaluation conducted during program or project operation so that immediate feedback may be provided and appropriate changes made; emphasized in the developmental phases of programme or project operation.

-Evaluation which determines the effectiveness and efficiency of methods, means and procedures at any point in the system approach model process. (Kaufman, 1979).

FORUM -A single event, or a series, usually of brief duration & usually open to a broad spectrum of individuals who gather to hear a speaker or speakers on a given topic; in the abstract, it is also used to denote an opportunity, intended or not, for people to express their opinions.

FUNCTIONAL ILLITERACY -A quality attributed to an individual who lacks one, or a combination, of the basic skills necessary to communicate effectively in written or arithmetic forms.

FUNCTIONAL LITERAcy - That amount of ability in reading & writing that will permit the individual to perform duties & assume responsibilities above the minimum level.

GOALS -The result or achievement towards which effort is directed; aim; end. Learners should be involved in the statement of program goals.

-The end result, immediate or remote, which the learner is seeking - a more general, global term than "objective", and encompassing many terminal objectives.

GUIDANCE -A process of offering information & possible alternatives around the needs of the individual so that he can make his own choices & decisions.

INDICATORS -The instruments or variables used to measure or observe a given activity; e.g., achievement test, expert testimony.

INDIVIDUALIZED INSTRUCTION -ideally, it is a system in which the individual learner or a controller tailor-makes instruction in terms of the individual learner's needs and characteristics; it most commonly refers to a learning programme for any given subject area which is organized in such a manner as to allow the learner to move at his own pace or style; it is a highly flexible system of multiple materials and procedures, in which the learner is given substantial responsibility for planning and carrying out his own organized programme of studies, with the assistance of advisors, and in which his progress is determined solely in terms of those plans.

-Individualization is a function of the frequency with which the decision to modify the instructional presentation as the result of some assessment of the individual student's needs, achievements, interests, abilities, or aspirations. (Tosti, 1979).

INDUCE -To lead or move by persuasion or influence, as to some action, state of mind, etc.; to bring about, produce, or cause. Facilitators cause the participants to focus on their learning through an inductive process.

INDUCTIVE ANALYSIS -A problematic approach to the breakdown of a communication or set of data to discover configurations within the data and to generate further questions and new categories of information, until the data ultimately generates a set of conclusions which may or may not relate to the original set of data.

INFORMATION -The level of knowledge at which facts are known and which precedes other cognitive processes; a purely quantitative property of an ensemble of items that enables categorization or classification of some or all of them.

INFORMATION SYSTEM -The channels or networks for storing, retrieving, and disseminating information for the effective functioning of a larger overall system.

INSTITUTE -A series of meetings centering upon a particular subject area or problem, lasting one or more days, which are designed to prepare leaders for selected activities or to assist them in solving particular problems of mutual concern.

INSTRUCTION -The systematic process of planning, organizing and presenting learning experiences for the learner.

INSTRUCTIONAL OBJECTIVE -A behavioural objective representing the instructor's plan to achieve specific learning outcomes from those learners for whom the instruction is designed.

-A statement of performance whose purpose is to specify precisely what a student is to learn in a way that will permit verification that it has been taught. Usually stated in terms of tasks, conditions, and standards. (Tosti, 1979).

INSTRUCTIONAL PSYCHOLOGY An interdisciplinary field of study primarily linked to psychology and education, but also utilizing information from fields like organizational behavior, computer science, systems engineering, communication, etc. A field of inquiry which concerns itself with the variables which operate in a "teaching-learning" environment. The fundamental paradigm from which Instructional Psychology operates is the Basic Learning Paradigm with all components defined as follows: - S (Stimuli) - R (Behavior) - S (Consequences) - S (Environment)
S (Stimuli): Any information presented to learners as instructional communication for the purpose of increased learning.
R (Behavior): Any type of behavior engaged in by the learner in response to, or as a function of S stimuli.
S (Consequences): Any stimulus which occurs in an

instructional situation and has a measurable impact on R behavior.
S (Environment): Any and all factors which can influence the variables above.
The primary goal of Instructional Psychology is to better understand each of the above factors individually and how they interact with each other. (Dan O. Coldeway, 1979).

INSTRUCTIONAL TECHNOLOGY A field which is primarily interested in the application of the theory and data base available from its parent field, Instructional Psychology. Instructional technologists are mainly concerned with the improvement of the learning process through the more efficient and effective use of a technology derived from theory and research in Instructional Psychology. Instructional Technology also uses relevant technology from other fields directly (e.g., the use of electronics), or in modified form (e.g., generating computer languages for instructional purposes) as a complement to its basic technology. (Coldeway, 1979).

INSTRUCTOR -The person responsible for organizing the teacher-student materials, equipment, facilities, curriculum & teaching methods necessary to enable the student enrolled to make progress toward the educational goals of both him/herself & society.

IN-SERVICE TRAINING -Various kinds of teaching-learning experiences, at least loosely described & defined, designed to help individuals already engaged in professions, vocations or occupations to perform more effectively that which they are already supposed to be doing reasonable well.

INTERN -A supervised individual who applies a program of study in a real or simulated setting.

INTERMEDIATE OBJECTIVE -A behavioural objective which states the conditions and behaviour for a task or activity necessary to reach the terminal objective; the standards for an intermediate objective need not be as rigid as those for terminal objectives.

INTERPERSONAL -Existing or occuring between two people. Interpersonal communication occurs both verbally & non-verbally.

KNOWLEDGE -The active recall of specifics and universals, the recall of methods and processes or the recall of a pattern, structure or setting; involves an active process of finding in a problem or task the appropriate signals, cues and clues which will most effectively bring out whatever knowledge is filed or stored.

LEARN -To acquire knowledge of or skill in by study, instruction, or experience; a change in behavior resulting from a change in attitude &/or knowledge. To learn something new can be a very threatening experience for some adults.

LEARNING -The cognitive process of adjusting and differentiating knowledge; learning occurs antecedent to performance in processes such as a change in cognitive structure, motivation, basic beliefs or musculature control, but learning can be evidenced only by observing a behavioral change in performance.

LEARNING CONTENT -The subject matter of an educational activity to be learned, including knowledge, skills, values, attitudes, understanding, etc.

LEARNING CRITERIA -Minimum acceptable standards of change in behavior - a comparative value for at least two different points in time.

LEARNING OBJECTIVE -A behavioral objective representing the learner's own plan to achieve specific learning outcomes according to criteria which specify in comparative terms the minimum acceptable change in behavior, both quantitative and qualitative.

LEARNING PROCESS -Learning as an event rather than as a result or a product; the activities, overt or verbal, engaged in during learning, and designed to promote learning, such as thinking, planning, practising and evaluating.

LECTURE -A formal, one-way verbal technique of communication in which the speaker conveys information to an audience on a specific subject in which the speaker possess some expertise.

LEISURE EDUCATION -Learning activities designed to develop knowledges, insights, skills, attitudes, values, & interests related to the constructive use of leisure time.

LIBERAL EDUCATION -Education that fosters an awareness & appreciation of the intellectual & aesthetic achievements of civilization, independence of mind, & critical, analytical & creative thought.

LIFELONG LEARNING -The process by which an adult continues to acquire, in a conscious manner, formal or informal education throughout their life span, either to maintain & improve vocational viability or for personal development.

MASTERY LEARNING -Learning which uses instructional methods and materials that enable the learner to attain a pre-specified criterion of achievement.

MATHETICS -The science of the learner's behavior while learning, just as pedagogy is the discipline in which attention is focused on the teacher's behavior while teaching. [See Andragogy]

MEDIUM A means of affecting or conveying instructional presentations. In instruction, there are three forms of media:
. display media (e.g., books, slides, video tapes, etc.)
. response acceptance media (e.g., workbooks, keyboards, tablets, etc.)
. instructional management media (e.g., computers, tutors, proctors, etc.)
(Tosti, 1979)

MENTOR -A coach or tutor: an individual who sponsors, teaches & guides others.

MOTIVATION -A specific hypothesized process that energizes differentially certain responses, thus making them dominant over other possible responses to the same situation; a specific hypothesized personal or organismic determiner of the direction and/or strength of action or line of action; there are different theories of motivation for each learning theory.

Synonym: DRIVE

-A condition of the external or internal environment of an organism which increases the likelihood that the organism will emit a specific class of responses. (Tosti, 1979)

NEEDS ASSESSMENT -A means of gathering, recording or analyzing data concerning the needs of people or settings within a particular range of possible needs such as learning, economic, social or cultural needs; used to assess the suitability of a particular programme for a certain context; the basis for stating the objectives of a programme.

NORM -A standard of performance; the level of achievement or performance of the model group of a population.

NORMS -The levels of acceptable performance based on responses obtained from a representative sample of a comparison group.

OBJECTIVE -To state certain expected outcomes that, if exhibited by the learners, indicate that they have some skill, attitude or knowledge. Objectives tell learners what is expected of them.

ORGANIZATION DEVELOPMENT -The improvement of the structure, procedures, relationships, environmental quality, & productivity of a social system through development of increased competencies in its personnel.

PARAPROFESSIONAL -An intermediate skill level between professional and non-professional within a given occupational category.

PEDAGOGY -The science or profession of teaching; the theory or the teaching how to teach.

-The art and science of teaching children.

PERFORMANCE CRITERIA -The minimum acceptable standards of behavior both quantitative and qualitative - an absolute value for performance at a given point in time.

PERFORMANCE OBJECTIVE -A behavioral objective which states the minimum acceptable standards of performance in absolute terms of quality and quantity.

PERFORMANCE TECHNOLOGY -A field which is primarily interested in the application of psychological and management theory to the behavior of organisms, both human and subhuman. Of primary importance to this field are the concepts of intrinsic motivation (e.g., the needs, desires, attitudes, past history, etc.) and extrinsic motivation (i.e., the influence of factors outside of the organism). Capitalizing upon research and information on both intrinsic and extrinsic motivation, performance technology is used to solve problems related to the behavior of organisms (mostly human problems) in applied settings. (Coldeway, 1979).

PERSONALIZED LEARNING - A system where:

1. The classroom climate meets the student needs for acceptance, love and respect, and creates the conditions for learning and personal growth to occur.
2. The students' concerns, interests, and goals are used as the primary basis for instruction.
3. The curriculum emerged from student interests and concerns or was adapted to meet them, providing

students with the knowledge and cognitive skills needed to achievetheir own learning goals.
4. The organization and management of the classroom is such that it builds a climate of trust, meets student needs, helps students become self-directed, and provided for individual learning differences (through individualized and/or programmed learning resources).

PHENOMENOLOGY: The phenomonological orientation considers man to be the source of all acts. Man is essentially free to make choices in each situation. The focal point of this freedom is human consciousness. Behavior is thus, only the observable expression and consequence of an essentially private, internal world of being. Therefore, only a science of man which begins with experience, as it is immediately given in this world of being, can ever be adequate for a study of the human organism. (Milholland, 1972)

PROBLEM -A situation in which, knowing certain of the elements, it is desired or required that others be ascertained; the situation may be a "practical" one, and the unknown elements, the necessary adaptive responses; these unknown elements are the source of frustrated and unsatisfied needs and this provides the motivation to learn.

PROBLEM-SOLVING -The process of selecting from a number of alternatives those that lead to a desired goal; this level of learning demands that the learner apply theory to reality.

PROGRAM -A systematic combination of elements or subparts directed toward carrying out a task or investigation to reach an overall objective; these elements or subparts range from the initial stage of establisning organizational and personal constraints in terms of philosophy, procedures etc. through to final evaluation or results.

-The total set of procedures, methods, strategies, objectives, & arrangements which are provided in order to more a student or group of students through a series of educational activities, all of which are designed to achieve pre-determined instructional objectives.

REHABILITATION -To restore an object or person to a former condition of useful & meaningful capacity & efficiency.

PROGRAM IMPLEMENTATION -The stage of a program during which activities are undertaken to achieve the objectives of the program; all activities such as consulting, reading, experimenting, observing, listening or discussing are deliberately aimed at the objectives of the program.

PROGRAM PLANNING -A method of identifying needs of the individual (institution or society) assigning priorities, setting goals and designing objectives, activities and evaluation procedures to meet the goals; program planning is a tool which charts the course of the program beforehand to increase the chances of arriving at the specified objective.

PROGRAMMING -The organization of environmental events which increase the probability that the student will make an appropriate response while attending to a relevant stimulus. (Tosti, 1979).

PSYCHOMOTOR -Of or pertaining to a motor response caused by psychic processes. Skills include a number of psychomotor behaviors.

PSYCHOMOTOR LEARNING -Learning evidenced by observable activities which involve some reasonably high order physical or muscular skills, some manipulation of materials or objects, and some act which requires a neuro-muscular coordination, such as repairing, building, climbing, etc., that is not purely a reflex action but the result of a conscious mental process.

RECEIVER -One or that which receives; takes possession of. For communications to take place there must be a receiver of the message being sent.

RECIPROCAL -Given or felt by each toward the other; mutual; given, performed, felt, etc. in return. Groups develop through reciprocal sharing.

REINFORCE -To strengthen the probability of (a response) to a given stimulus by giving or withholding a reward. Questioning is one method to reinforce a content area, a smile is another.

REINFORCEMENT -A process in which some stimulus, presented immediately following a response, increases the rate at which the response is emitted in a standard situation, or increases the probability that the response will recur when the situation recurs.

RELIABILITY -In measurement, the degree to which a test measures precisely and consistently.

REMEDIAL EDUCATION An adult program designed to raise the level of competence of an individual in basic subject areas to that which he should have reached during the time spent in formal school.

RESOURCE -Any object, person or other aspect of the environment which can be used for support or help in an educational activity.

RESOURCE PERSON -An individual whose experience knowledge are of value in helping to plan, to operate efficiently, & to meet & solve problems.

RETRAINING -An educational process whereby selected clientele, who have acquired specific skills that seem outdated, are taught new skills designed to better prepare them for changing economic & social conditions. Retraining frequently involves the changing of attitudes & the acquisition of new knowledge prior to skill acquisition.

REWARD -A satisfaction-yeilding stimulus or stimulus-object that is obtained upon the successful performance of a task (which may be self- or other -imposed).

SELF-CONCEPT -A person's view of himself; the fullest description of himself which a person is capable of at any given time; emphasis is upon the person as object of his own self-knowledge, but his feeling about what he conceives himself is usually included.

SELF-DIRECTED LEARNING -The change in the cognitive processes or conceptualizations as evidenced by the extent to which a learner in a learning programme determines his own learning objectives, plans learning procedures and activities and devises evaluation criteria to evaluate his learning programme.

-Although varying in degrees, self-directed learning is a situation where an individual assumes most of the responsibility for planning his strategy, maintaining his motivation, and making certain throughout the learning process that everything necessary for success is done. The initiative, responsibility and control reside within the learner, not inside someone else. (Freeman, 1980) This type of learning has also been described as self-instruction (Johnstone and Pavera, 1965), self- education (Verner, 1964), independent study (Hatch and Bennet, 1960), and self- teaching (Tough, 1968).

SEMINAR -A small group of [learners] engaged in advanced study & original [field work] under a [facilitator] and meeting regularly to exchange information and hold discussions. As part of the Core Knowledge program twelve monthly seminars will be held.

SEQUENTIAL LEARNING -A scheme of learning which provides for increasingly more difficult & abstract learning built upon previously acquired knowledge, skills, attitudes, & values, & which is planned to build cumulatively toward desired outcomes.

SKILL -The capacity to perform some mental or physical act, whether it be easy and simple or hard and complex.

-The ability, coming from one's knowledge, practice, aptitude, etc. to do something well; competent excellence in performance. Many people consider counselling a skill.

SOURCE -Any thing or place from which something comes, arises or is obtained. The source of a person's fear of dogs may have been due to some childhood experience.

STIMULUS -Designates a class of events that impinge on an organism's sensory equipment and that experimenters can manipulate, describe or hypothesize to exist.

-Something that incites to action or exertion or quickens action, feeling, thought. A lecture may be called a stimulus which leads to questions.

STUDENT An individual who is participating in an educational program.

SUMMATIVE EVALUATION -Evaluation conducted after an educational process or product has been completed so that judgements and comparisons might be made regarding effectiveness.

-Determination of the results of implementing the selected methods - means in terms of meeting prespecified objectives and the meeting of identified needs (if needs have been identified), (Kaufman, 1979).

SYSTEM -A body of interdependent factors which form a collective entity; all the elements of the system work together to perform a given function and may be of any level of complexity.

SYSTEMS ANALYSIS -on the basis of an identified problem, it is the conceptualization of a general process, usually in a diagram, by which the making of judgements and taking of actions can be charted into an orderly and established flow of work.

SYSTEM APPROACH -A formal planning and doing process which intends to identify and meet defined, validated, and justified needs. It includes the identification of problems based upon external needs, the determination of solution requirements and the identification of solution alternatives, the selection of solution strategies and tools, implementation of the selected strategies and tools, determination of performance effectiveness and efficiency, and the revision of any or all of the previous steps and outcomes (at any time in the process) based upon the extent to which the designed system has met the validated needs. (Kaufman, 1979).

TASK -In a learning programme, the activities required or demanded of the learner in order to fulfill his learning objectives; more generally, the duties or activities perceived as necessary in an individual's work, area of interest or hobby.

TASK ANALYSIS -Breaking down an instructional goal or objective into its components and arranging them into a logical instructional sequence.

TEACHER -One who shares knowledge, insight, sensitivity & skills with persons in a learning situation.

TEACHING -The process of providing information and instruction and appropriate situation, conditions or activities designed to facilitate learning - amore global or comprehensive term than instruction and including instruction.

TERMINAL BEHAVIOUR -The behaviour that the learner expects to acquire or is expected to have acquired by the end of a learning programme.

TERMINAL OBJECTIVE -As opposed to an intermediate objective, it is a behavioural objective which states the behaviour which is the final intended outcome of an educational activity.

THESIS -A proposition formally set forth for proof or disproof, including a review of the literature relating to the problem, a description of the procedures for treatment of the problem, the actual activities undertaken for treatment of the problem, the results of the treatment based upon the student's analysis of the data, and conclusions based on the student's interpretation of the data.

-In the adult education programme at St. Francis Xavier University, it is a documented report of the student's problem of acquiring skills as an adult educator in terms of his personal learning curriculum; it presents the procedures for treatment of the problem and the actual steps taken in this treatment; reporting of the evidence of the student's learnings from the treatment based on evaluation data, and conclusions based on the student's interpretation of the evidence.

THOUGHT -The product of mental activity. An effective facilitator is able to help group members articulate their thoughts.

TRAINEE A person who is in the process of acquiring a definite & prescribed set of skills & qualifications.

TRAINING -The process of facilitating the acquisition and mastery of skills by means of planned and directed activities which present the instructions and instructional materials for each of the discrete observable behaviors entailed in the skill in a time-limited logical sequence based on the increasing complexity of the behaviors.

-The totality of instructions, planned circumstances and directed activity in which the learner is most often concerned with acquiring psychomotor skills and such mental operations as have only few and simple alternatives.

UNFELT NEED -The discrepancy between what a person (or persons) is or is able to do and should be or should be able to do as perceived by an observer but not perceived by the individual himself; sometimes referred to as an ascribed need.

UPGRADING -Raising the performance or educational levlel of individuals or organizations.

VALIDATION -Any process by which one can determine if the system does what it claims it does (Tosti,11979).

VALIDITY -In measurement, the degree to which a test measures what it is intended to measure.

VALUES -An abstract concept - often merely implicit, that defines for an individual, or for a social unit what ends or means to an end are desirable. These abstract concepts or worth are not usually the result of the individual's own valuing; they are social products that have been imposed on him and only slowly internalized.

VOCATIONAL EDUCATION -Organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment.

WORKSHOP -A seminar, discussion group, or the like, which emphasizes exchange of ideas and the demonstration and application of techniques and skills. Several workshops are necessary to train a number of facilitators to carry out special educational activities.

-A teaching-learning experience in which a group of people come together for the specific purpose of both listening & doing. Emphasis is usually on active involvement by participants. Frequently the participants have similar backgrounds & common interests.

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ANTIGONISH MOVEMENT

Bolger Cegola Coady Coutinho Elkins Exner Krumboltz Laidlaw Mifflen Pluta Setsabi

CAREER & PROFESSIONAL EDUCATION

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PROGRAM PLANNING & IMPLEMENTATION

Adams Adult Aker Alexander Alvir Amundsen Anderson Apple Armsey Armstrong Askov Atkins Atkinson Avakian Averch Bailey Baker Banathy Barnes Barton Bass Batdorf Beal Beckhard Bellamy Benne Bergevin Biddle Bitgood Blake Bloom Bobbitt Boone Borg Boyle Braga Briggs Brophy Bruning Burke Burrichter Burt Burton Byers Calhoun Carlson Carpenter Center Charles Charters Child Cofer Coffin Cohen Coldeway Colvin Craig Cram Crawley Cronbach Dale Dansereau Davies

Davis DeBloois DeCrow Dean Deane Designing Dewey Dick Dickinson Drumheller Dudgeon Duley Educational Edwards Ehrenpreis Eisner Engleman Evarts Felker Filbeck Florida Frase French Friesen Gagne Galloway Garrison George Gerlach Gilbert Glaser Good Goodlad Gorman Greenwood Grotelueschen Haas Harris Hartley Hatley Hebb Henson Hollard Holt Hoover Hosford Hospital Hostrop Houle Howe Hunkins Hunt Hurst Hutchinson Hyman Inbar Janser Janusewski Jarechke Johnson Johnston Jones Joyce Kapfer Kaufman Keller Kellogg Kemp Kemp Kibler Klavon Klevins Knowles Kohl Kopstein Koran Korn Kozma Krathwohl Kulhavy Kuzeman Lancaster Landa Lander Langdon Langer Lawton Lee Lefrancois Levin Lewis Leypoldt Lindvall Lippitt Loyd Lynton Lysaught MacKenzie Mager Marton Mason Massialost Mayo McAshan McDanield McGuire McKeachie McKenzie McKinley McLeish Mechner Melarango Merrill Mezirow Miley Morgan Morgan Nylen O S S Odusina Otto Packard Pereira Peterson Pettman Pfeiffer Pfund Phillips Pigores Plowman Popham Raths Ray Richmond Rickards Robin Robins Rogers Romey Rose Rosenbaum Rosford Rossi Rossman Roundtree Rubin Runkel Ruskin Russell Ryan Scarfe Schid Schmuck Schulman Sheffield Should Silvern Silvius Simon Smith Solomon Spears Staley Stanford Stewart Stiles Stroller Stutsman Suessmuth Sullivan Taba Taba Taylor Tellman Tennyson Thelen Thompson Tracey Tyler U. S. Vallance Verner Verner Warwick Weinstein Wong Worell Zahorik Zais Zimmerman Zoll Zukemann

RESEARCH IN ADULT EDUCATION

American Babbie Barnes Baron Berelson Biddle Borgatta Boshier Bower Brooks Brunner Buckley Bushe Cattell Colaizzi Commager Corbally Cronbach Cunningham Davis Dawson DeCrow de S Brunner Dexter Drummond Dubin Dubin Edwards Fitz-Gibbon Flanders Fleishman Gephart Gerlach Glaser Good Gordon Gottschalk Grabowski Graves Griffith Guilford Habenstein Heim Hillway Howe Johnston Kahn Kaplan Kerlinger Knox Krathwohl Kreitlow Kulhavy Lake Lindzey Little Maier Malott Marquer McGill McKeachie McLaughlin Miller Moon Mouly Mozirow Mullr National Nie Nunnally Opacinch Openheim Osgood Parker Pool Quilling Register Reneir Rezba Rokeach Rosenshine Rosner Rothykopf Runkel Sax Scandura Selltiz Senb Shapson Shaw Snider Stinson Tallmadge Thomas Townsend Travers Tuckman Turabian VanDalen VanHorn Webb Weiburg Weimer Weltner Westbury White Williams Yasatake Zahn

SELF-DIRECTED LEARNING

Adult Education Allender Allison Association Beal Bergevin Bertram Block Brown Bulatae Bunderson Burke Carpenter Carr Christen Danish Deci DeVito Dimock Dressel Dunne Eble Froe Gleason Gowan Grabowski Houle How Adults Institute I.L.O. Jones Kidd Klevins Knowles Leinhardt Lowe Mahoney Massialas McKenzie Miles Morgan Polanyi Postman Prosser Rosenbaum Shulman Silberman Stephens Studies Study

Circle Teaching Techniques The Teaching Tough Treasury Verner weingartner Yanoff Zevin

SYSTEMS THEORY

Banathy Baughart Buckley Bueschel Bushnell Cleland Cook Handy Hare Harris Hartley Hunter Kast Kaufman Kuhn Loomis Nadler Pfeiffer Pierson Robinson Silvern wang wiest Zadeb

VOLUNTARY ORGANIZATIONS & VOLUNTEERISM

Arthur Ball Hanson Loeser Madsen Pell Robertson Schindler-Rainman Sills Stenzel Trecker

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P2 PLANNING BETTER PROGRAMS
P3 TAKING ACTION IN THE COMMUNITY
P4 UNDERSTANDING HOW GROUPS WORK
P5 HOW TO TEACH ADULTS
P6 HOW TO USE ROLE PLAYING
P7 SUPERVISION AND CONSULTATION
P8 TRAINING GROUP LEADERS
P9 CONDUCTING WORKSHOPS AND INSTITUTES
P10 WORKING WITH VOLUNTEERS
P11 CONFERENCES THAT WORK
P12 GETTING AND KEEPING MEMBERS
P13 EFFECTIVE PUBLIC RELATIONS
P14 BETTER BOARDS AND COMMITTEES
P15 STREAMLINING PARLIAMENTARY PROCEDURE
P16 TRAINING IN HUMAN RELATIONS
P17 EDUCATION FOR AGING

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